

# **SPECIAL PROVISIONS & SUPPLEMENTAL SPECIFICATIONS**

CSI-Inch/Pound

Project No:	SP-9999(809)
Name:	Various Locations In Region ONe
	Curb Match
County:	BOX ELDER, DAVIS, MORGAN, WEBER
Bid Opening:	April 26, 2005
	Date



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**I. 2005 Standard Specifications**

The State of Utah Standard Specifications for Road and Bridge Construction, U.S. Standard Units (Inch Pound Units), Edition of 2005 applies on this project as a static Specification Book as well as all other applicable specification changes.

Refer to Part XII (Special Provisions and Supplemental Specifications) for other project specific specifications.

## II. List of Revised Standard Drawings

### Change One

Revised February 24, 2005

AT 1	Legend Sheet	02/24/2005
AT 2	Ramp Meter Details	02/24/2005
AT 3	Ramp Meter Sign Panel	02/24/2005
AT 5	Ramp Meter Loop Installation	02/24/2005
AT 6	Conduit Details	02/24/2005
AT 7	Polymer-Concrete Junction Box Details	02/24/2005
AT 8	ATMS Cabinet	02/24/2005
AT 9	ATMS Cabinet Disconnect And Transformer Frame	02/24/2005
AT 10	CCTV Mounting Details	02/24/2005
AT 11	CCTV Pole Details	02/24/2005
AT 12	CCTV Pole Foundation For Dedicated CCTV Pole	02/24/2005
AT 13	Deleted	N/A
AT 14	Weigh In Motion Piezo Details	02/24/2005
AT 15	RWIS Site And Foundation Details	02/24/2005
AT 16	RWIS Tower Base And Service Pad Layout	02/24/2005
AT 17	Ground Rod Installation And Tower Grounding	02/24/2005
AT 18	TMS Detection Zone Layout	02/24/2005
BA 3	Deleted	N/A
BA 3A	Cast In Place Constant Slope Barrier	02/24/2005
BA 3B	Precast Concrete Constant Slope Transition Section For Crash Cushion And W-Beam Guardrail	02/24/2005
BA 4B	W-Beam Guardrail Transition	02/24/2005
BA 4C	W-Beam Guardrail Transition Curb Section	02/24/2005
CC 7	Deleted	N/A
CC 7A	Grading And Installation Details Crash Cushion Type F Quad Trend 350	02/24/2005
CC 7B	Reserved For Future Use	N/A
CC 8	Deleted	N/A
CC 8A	Grading And Installation Details Crash Cushion Type G	02/24/2005
CC 8B	Grading And Installation Details For "3R" Projects Crash Cushion Type G	02/24/2005
CC 9A	Grading And Installation Details Crash Cushion Type H	02/24/2005
CC 9B	Grading And Installation Details Crash Cushion Type H (Parabolic Flare)	02/24/2005
DD 4	Geometric Design for Freeways (Roadway)	02/24/2005
FG 3	Swing Gates Type I For Gates Less Than 17'	02/24/2005
ST 5	Painted Median And Auxiliary Lane Details	02/24/2005

### **III. Materials Minimum Sampling and Testing**

**Follow the requirements of the Current Materials Minimum Sampling and Testing Manual:**

**Materials Minimum Sampling and Testing Manual reference can be found from the UDOT Web Site at:**

**<http://www.udot.utah.gov/index.php/m=c/tid=645>**



# NOTICE TO CONTRACTORS

Sealed proposals will be received by the Utah Department of Transportation UDOT/DPS Building (4th Floor), 4501 South 2700 West, Salt Lake City, Utah. 84114-8220, until 2 o'clock p.m. Tuesday, April 26, 2005, and at that time the download process of bids from the USERTrust Vault to UDOT will begin, with the public opening of bids scheduled at 2:30 for Curb Match of Various Locations In Region ONE in BOX ELDER, DAVIS, MORGAN, WEBER Counties, the same being identified as State Maintenance Project No: SP-9999(809).

**Federal Regulations:**

Wage Rate Non-Applicable.

**Project Location:** Various Locations In Region ONE

**The principal items of work are as follows (for all items of work see attachment):**

HMA - 1/2 inch  
Mobilization  
Traffic Control

**The project is to be completed:** June 30, 2005.

**Other Requirements:**

All project bidding information, including Specifications and Plans, can be viewed, downloaded, and printed from UDOT's Project Development Construction Bid Opening Information website, <http://www.udot.utah.gov/index.php/m=c/tid=319>. To bid on UDOT projects, bidders must use UDOT's Electronic Bid System (EBS). The EBS software and EBS training schedules are also available on this website.

Project information can also be reviewed at the main office in Salt Lake City, its Region offices, and its District offices in Price, Richfield, and Cedar City.

Project Plans cannot be downloaded or printed from the website unless your company is registered with UDOT. Go to UDOT's website to register. Unregistered companies may obtain a **CD**, that contains the Specifications and Plans, from the main office, 4501 South 2700 West, Salt Lake City, (801) 965-4346, for a fee of \$20.00, plus tax and mail charge, if applicable, none of which will be refunded.

As required, a contractor's license must be obtained from the Utah Department of Commerce.

Each bidder must submit an electronic bid bond from an approved surety company using UDOT's Electronic Bid System (EBS); or in lieu thereof, cash, certified check, or cashier's check for not less than 5% of the total amount of the bid, made payable to the Utah Department of Transportation, showing evidence of good faith and a guarantee that if awarded the contract, the bidder will execute the contract and furnish the contract bonds as required.

The right to reject any or all bids is reserved.

If you need an accommodation under the Americans with Disabilities Act, contact the Construction Division at (801) 965-4346. Please allow three working days.

Additional information may be secured at the office of the Utah Department of Transportation, (801) 965-4346.

**Dated this 16th day of April, 2005.**

**UTAH DEPARTMENT OF TRANSPORTATION**  
**John R. Njord, Director**

**Revised Date:**

# Utah Department of Transportation

## Bidder's Schedule

**Bid Opening Date:** 4/26/2005

**Project Number:** SP-9999(809)

**Project Name:** Various Locations In Region ONE

**Concept:** Curb Match

**Funding:** MAINTENANCE

**Bid Items Version#:** 1

**Region:** REGION 1

**County:** BOX ELDER

#	Item	Description	Quantity	Unit
<b>10 - ROADWAY</b>				
1	01285001P	Mobilization	1	lump sum
2	015540005	Traffic Control	1	lump sum
3	018910010	Move Street Sign	2	each
4	01892001*	Reconstruct Catch Basin	3	each
5	01892005*	Reconstruct Manhole	2	each
6	022210040	Remove Cleanout Box	1	each
7	022210125	Remove Concrete Curb and Gutter	25	foot
8	02316002P	Roadway Excavation (Plan Quantity)	450	cubic yard
9	02610001P	Pipe Culvert	4	foot
10	02612001*	Catch Basin	2	each
11	02721007P	Untreated Base Course 3/4 inch or 1 inch Max	325	ton
12	02741005P	HMA - 1/2 inch	650	ton
13	02771002*	Concrete Curb and Gutter Type B1	325	foot
14	02771004*	Concrete Driveway Flared, 6 inch Thick	300	square foot
15	02771005*	Pedestrian Access Ramp	1	each
16	02786001*	Open Graded Surface Course	30	ton

\*Note: Item numbers ending with "\*" or "P" identify a change to the Standard Specification, Supplemental Specifications or Measurement and payment. Read all related documents carefully.

## VI. Measurement and Payment

### PROJECT #SP-9999(809)

The Department will measure and pay for each bid item as detailed in this section.  
Payment is contingent upon acceptance by the Department.

Items are listed by Specification and in tables as follows:

<b>1</b>	<b>01285001P</b>	<b>Mobilization</b>	<b>Lump sum</b>
	<b>A.</b>	<b>Include survey as needed.</b>	
	<b>Payment</b>	<b>Amount Paid</b>	<b>When Paid</b>
	First	The lesser of 25% of Mobilization or 2.5% of contract	With first estimate
	Second	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 5% of contract
	Third	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 10% of contract
	Fourth	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 20% of contract
	Final	Amount bid in excess of 10% of contract price.	Project Acceptance-Final

<b>2</b>	<b>015540005</b>	<b>Traffic Control</b>	<b>Lump Sum</b>
	<b>Payment</b>	<b>Amount Paid</b>	<b>When Paid</b>
	First	25% of the bid item amount	With first estimate
	Second	Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

<b>3</b>	<b>018910010</b>	<b>Move Street Sign</b>	<b>Each</b>
In place			

<b>4</b>	<b>01892001*</b>	<b>Reconstruct Catch Basin</b>	<b>Each</b>
A. In place B. Includes plating if work is in travel lane.			

<b>5</b>	<b>01892005*</b>	<b>Reconstruct Manhole</b>	<b>Each</b>
A. In place B. Includes plating if work is in travel lane.			

<b>6</b>	<b>022210040</b>	<b>Remove Cleanout Box</b>	<b>Each</b>
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Removed
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<b>7</b>	<b>022210125</b>	<b>Remove Concrete Curb and Gutter</b>	<b>Feet</b>
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<b>8</b>	<b>02316002P</b>	<b>Roadway Excavation (Plan Quantity)</b>	<b>Cubic yard</b>
A. Plan quantity, in original position, computed by the method of average end areas. B. The Department will authorize cross sections or modifications including excavation below subgrade, unstable slopes, unpreventable slides, and terracing. C. The Department will not measure or pay for excavation in excess of that authorized. D. The Department will pay for re-handling or additional haul when it is directed in writing as "Extra Work". E. Includes removal and disposal of existing asphalt roadway and paved ditch. F. Include compaction of remaining UTBC after excavation.			

<b>9</b>	<b>02610001P</b>	<b>Pipe Culvert</b>	<b>Feet</b>
Measured along the centerline of barrel in place connecting existing pipe to new catch basin. Match existing.			

<b>10</b>	<b>02612001*</b>	<b>Catch Basin</b>	<b>Each</b>
<b>Measurement:</b> A. Each drainage feature will consist of all necessary materials required to make complete, which may include the following: Concrete-Small Structure, Reinforcing Steel-Coated, Grates, Covers, Frames, Manhole Steps, and other items to furnish a completed drainage feature.  <b>Payment:</b> A. DEPARTMENT will make no separate payment for Concrete-Small Structure, Reinforcing Steel-Coated. All of these items are to be included in the contract unit price. B. DEPARTMENT will make no separate payment for excavation for structures, to be included in the contract unit price.  <b>Price Adjustments for Strength</b> A. When concrete is below specified strength: 1. DEPARTMENT may accept item at a reduced price. 2. The pay factor will be applied to the portion of the item that is represented by the strength tests that fall below specified strength. 3. DEPARTMENT will calculate the pay factor as follows: Psi below specified strength:      Pay Factor: 1 - 100                                      0.98 101 - 200                                    0.94 201 - 300                                    0.88 301 - 400                                    0.80 More than 400                              0.50 or Engineer may reject			

<b>11</b>	<b>02721007P</b>	<b>Untreated Base Course 3/4 inch or 1 inch Max</b>	<b>Ton</b>
Includes grading, leveling, and compaction of material.			

<b>12</b>	<b>02741005P</b>	<b>HMA - 1/2 inch</b>	<b>Ton</b>
A. Includes aggregates, asphalt binder, hydrated lime, tack coat, and other additives, etc. The Department will not pay separately for asphalt binder, hydrated lime, tack coat, additives, etc. B. Use "Small Quantity" testing provisions (See Section 02741, Part 1.4, Acceptance).			
<b>13</b>	<b>02771002*</b>	<b>Concrete Curb and Gutter Type B1</b>	<b>Feet</b>
Measured along the roadway face. Includes excavation and untreated base course.			
<b>14</b>	<b>02771004*</b>	<b>Concrete Driveway Flared, 6 inch Thick</b>	<b>Square Feet</b>
In place, include Radius and Flares. Includes excavation and untreated base course.			
<b>15</b>	<b>02771005*</b>	<b>Pedestrian Access Ramp</b>	<b>Each</b>
In place. Includes all materials and work necessary for a complete pedestrian access ramp. The curb cut will remain part of the curb and gutter installation			
<b>16</b>	<b>02786001*</b>	<b>Open Graded Surface Course</b>	<b>Ton</b>
<b>Measurement:</b> In place. Includes aggregates, asphalt binder, hydrated lime, tack coat, and other additives, etc. The Department will not pay separately for asphalt binder, hydrated lime, tack coat, additives, etc.			

**Summary Report**  
**Project: SP-9999(809)**  
**Various Locations In Region ONe**

**Version: 1**

Detail	Alt Group	Alt #	Description	Qty	Unit
<b>10 - ROADWAY</b>	0	0			
Item Number	Description		Qty	Unit	
01285001P	Mobilization		1	Lump	
015540005	Traffic Control		1	Lump	
018910010	Move Street Sign		2	Each	
01892001*	Reconstruct Catch Basin		3	Each	
01892005*	Reconstruct Manhole		2	Each	
022210040	Remove Cleanout Box		1	Each	
022210125	Remove Concrete Curb and Gutter		25	ft	
02316002P	Roadway Excavation (Plan Quantity)		450	cu yd	
02610001P	Pipe Culvert		4	ft	
02612001*	Catch Basin		2	Each	
02721007P	Untreated Base Course 3/4 inch or 1 inch Max		325	Ton	
02741005P	HMA - 1/2 inch		650	Ton	
02771002*	Concrete Curb and Gutter Type B1		325	ft	
02771004*	Concrete Driveway Flared, 6 inch Thick		300	sq ft	
02771005*	Pedestrian Access Ramp		1	Each	
02786001*	Open Graded Surface Course		30	Ton	

# Detailed Report

SP-9999(809)

Version: 1

## Various Locations In Region ONE

10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
<b>018910010</b>	<b>Move Street Sign</b>					2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.36				1.0		
SR-66	R.P. 12.93				1.0	School Crossing Ahead Sign	
					2.0		
<b>01892001*</b>	<b>Reconstruct Catch Basin</b>					3	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.30		R.P. 3.36		3.0		
					3.0		
<b>01892005*</b>	<b>Reconstruct Manhole</b>					2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.30		R.P. 3.36		2.0		
					2.0		
<b>022210040</b>	<b>Remove Cleanout Box</b>					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.36				1.0		
					1.0		
<b>022210125</b>	<b>Remove Concrete Curb and Gutter</b>					25	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.36				20.0	34th Street	
					20.0		
<b>02316002P</b>	<b>Roadway Excavation (Plan Quantity)</b>					450	cu yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 1.51		R.P. 1.53		56.0	4875 South & Harrison	
SR-203	R.P. 3.30		R.P. 3.36		91.0	34th Street & Harrison	
SR-38	R.P. 8.45		R.P. 8.51		42.0	Honeyville	
SR-60	R.P. 3.79		R.P. 3.89		186.0	South Weber Drive	
SR-66	R.P. 12.18		R.P. 12.20		20.0	370 South, Morgan	
SR-66	R.P. 12.89		R.P. 12.93		40.0	150 North, Morgan	
					435.0		

**Detailed Report**  
**SP-9999(809)**  
**Various Locations In Region One**

**Version: 1**

**10 - ROADWAY**

**Alt Group: 0 Alt #: 0**

Item Number	Description				Use Qty	Unit
<b>02610001P</b>	<b>Pipe Culvert</b>				4	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SR-203	R.P. 3.36				4.0	34th St
					4.0	
Note #	Note					
1	Extend pipe culvert to tie into new catch basin at East end of 34th Street radius.					
<b>02612001*</b>	<b>Catch Basin</b>				2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SR-203	R.P. 3.36				2.0	34th Street
					2.0	
<b>02721007P</b>	<b>Untreated Base Course 3/4 inch or 1 inch Max</b>				325	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SR-203	R.P. 3.3		R.P. 3.36		105.0	34th St Area
VARIOUS					220.0	As needed for curb match base work
					325.0	
Note #	Note					
1	On SR-203 at R.P. 3.3, Depth=6" under HMA, Depth=3" under C&G					
<b>02741005P</b>	<b>HMA - 1/2 inch</b>				650	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SR-203	R.P. 3.30		R.P. 3.36		60.0	Length=331', Width=6', Depth=5"
SR-203	R.P. 1.51		R.P. 1.53		30.2	Length=125', Width=8', Depth=5"
SR-38	R.P. 8.45		R.P. 8.51		81.1	Length=316', Width=8.5', Depth=5"
SR-60	R.P. 3.79		R.P. 3.89		362.5	Length=600', Width=20', Depth=5"
SR-66	R.P. 12.18		R.P. 12.20		30.2	Length=125', Width=8', Depth=5"
SR-66	R.P. 12.89		R.P. 12.93		63.4	Length=210', Width=10', Depth=5"
					627.4	
Note #	Note					
1	Assumed unit weight is 145 pounds per cubic foot.					

**Detailed Report**  
**SP-9999(809)**  
**Various Locations In Region ONE**

**Version: 1**

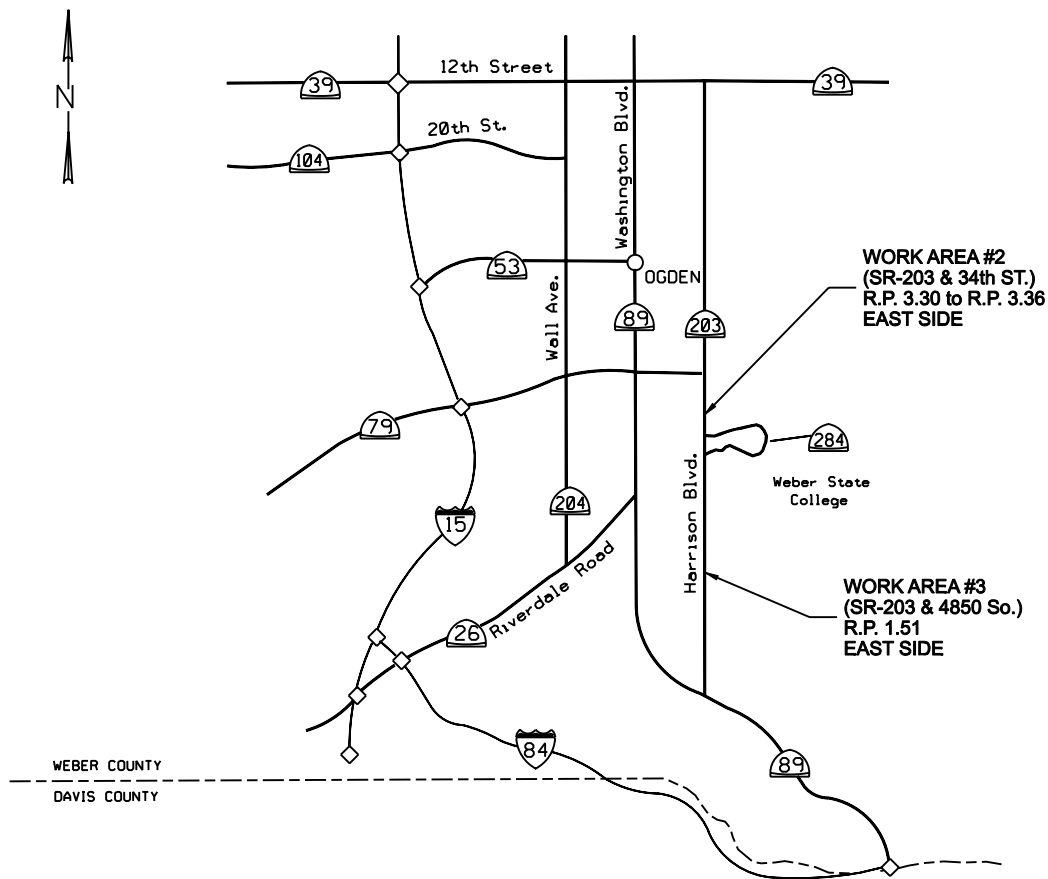
**10 - ROADWAY**      **Alt Group: 0**    **Alt #: 0**

Item Number	Description					Use Qty	Unit
<b>02771002*</b>	<b>Concrete Curb and Gutter Type B1</b>					325	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.30		R.P. 3.36		305.0		
					305.0		
<b>02771004*</b>	<b>Concrete Driveway Flared, 6 inch Thick</b>					300	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.30		R.P. 3.36		289.0	2 Driveways between Fire Station and 34th St.	
					289.0		
<b>02771005*</b>	<b>Pedestrian Access Ramp</b>					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 3.36				1.0	SE Corner of SR-203 & 34th Street	
					1.0		
<b>02786001*</b>	<b>Open Graded Surface Course</b>					30	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SR-203	R.P. 1.51		R.P. 1.53		6.0	Length=125', Width=8', Depth=1"	
SR-203	R.P. 3.30		R.P. 3.36		12.0	Length=331', Width=6', Depth=1"	
					18.0		

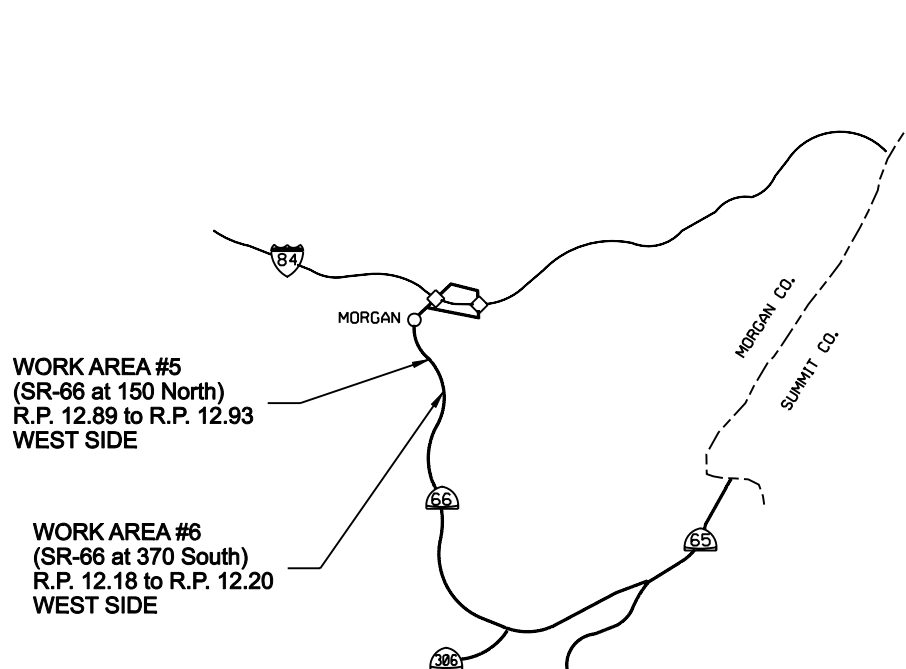
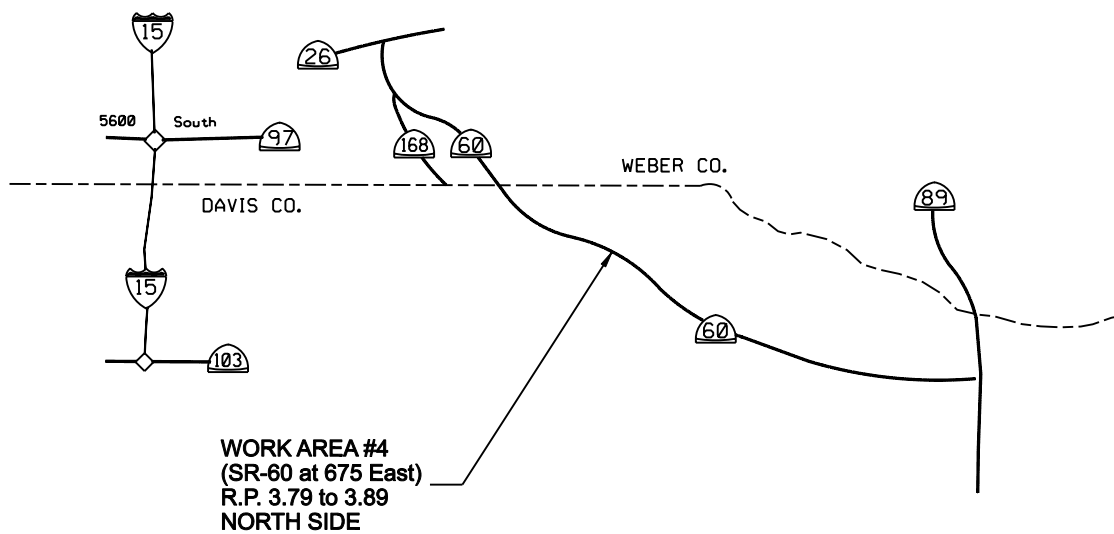
Note # Note

1 Assumed unit weight is 145 pounds per cubic foot.

**WORK AREA #1**  
**(SR-38 at 6980 North)**  
**R.P. 8.45 to R.P. 8.51**  
**WEST SIDE**



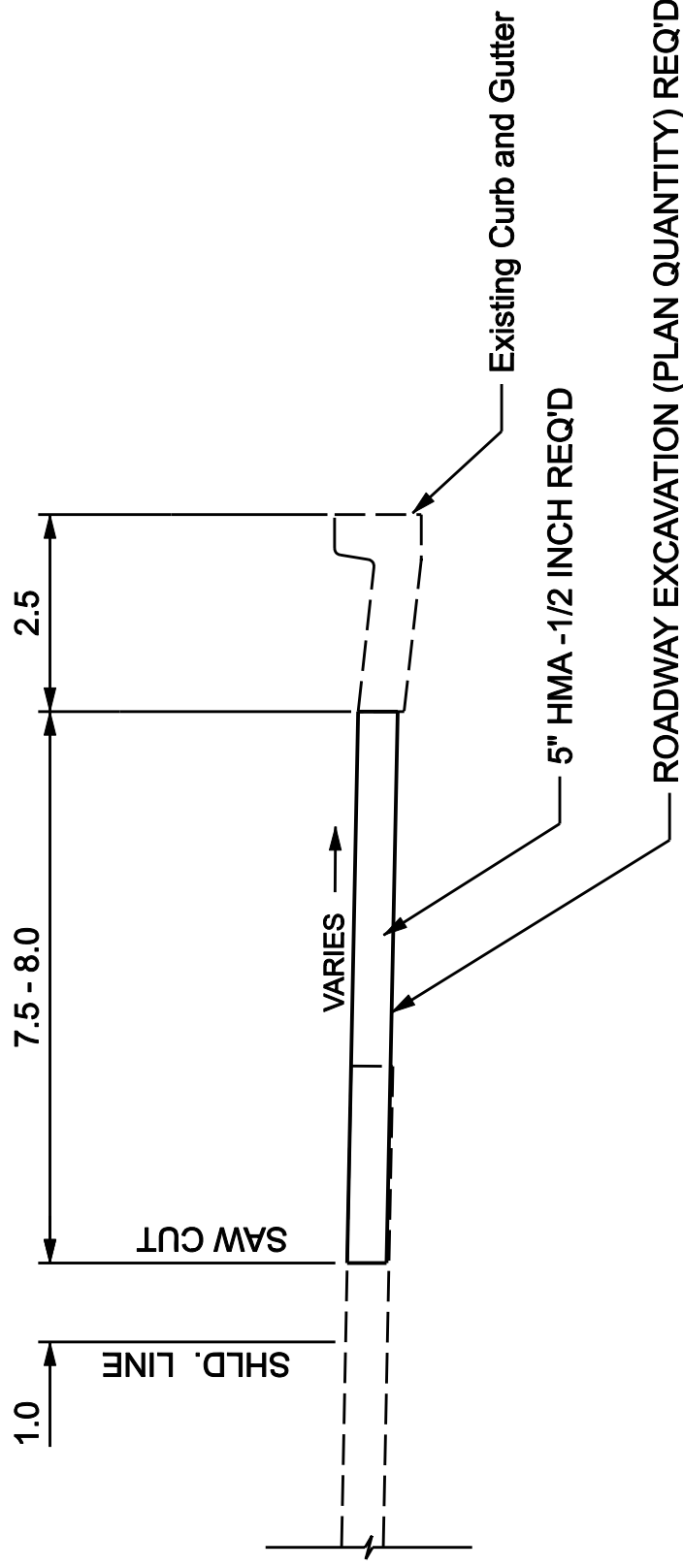
LOCATION MAP (PAGE 2 of 2)  
MAINTENANCE PROJECT  
SP-9999(809)  
CURB MATCH  
VARIOUS LOCATIONS IN REGION ONE





# TYPICAL SECTION #1

SR-38 at 6980 North, Honeyville

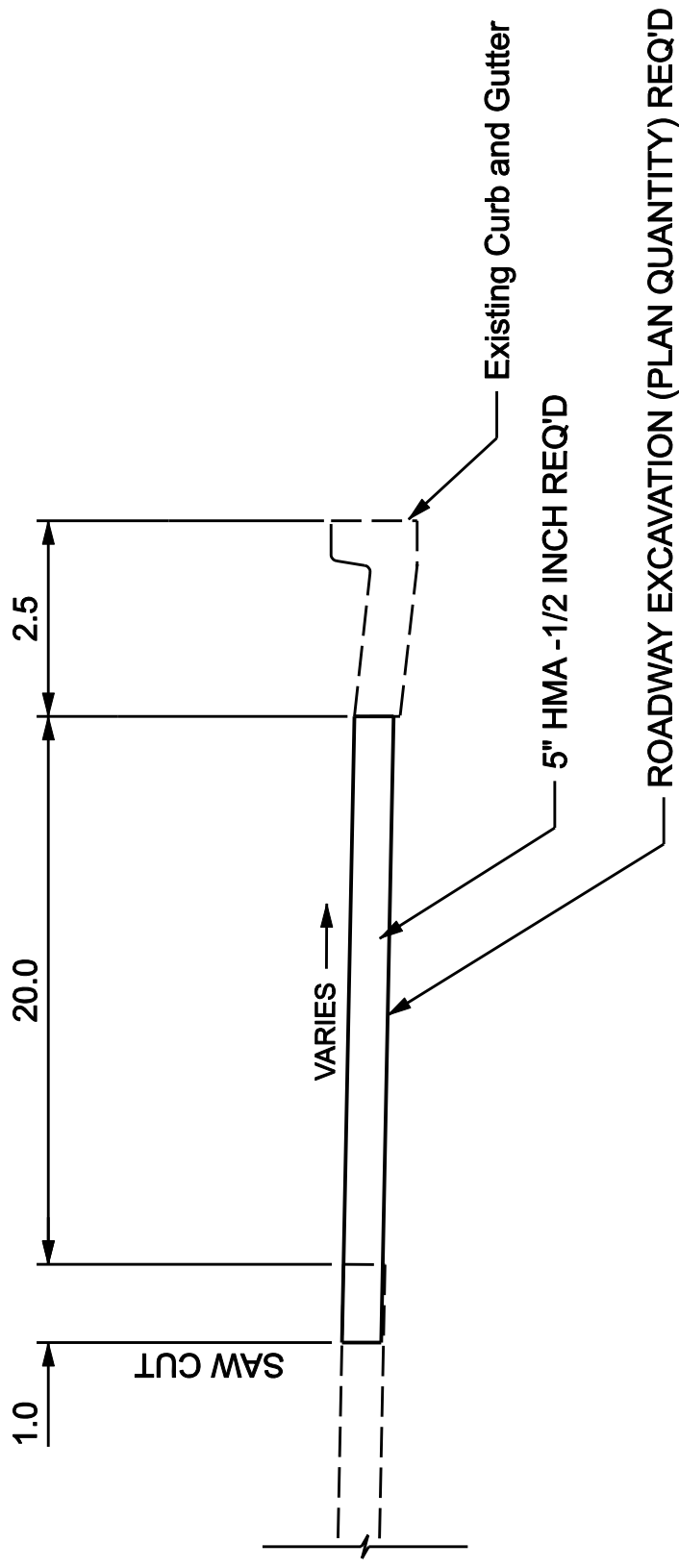


## NOTES

1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.
2. WIDTHS ARE APPROXIMATE.
3. MATCH EXISTING CROSS SLOPE.

# TYPICAL SECTION #2

SR-60 at 675 East, South Weber

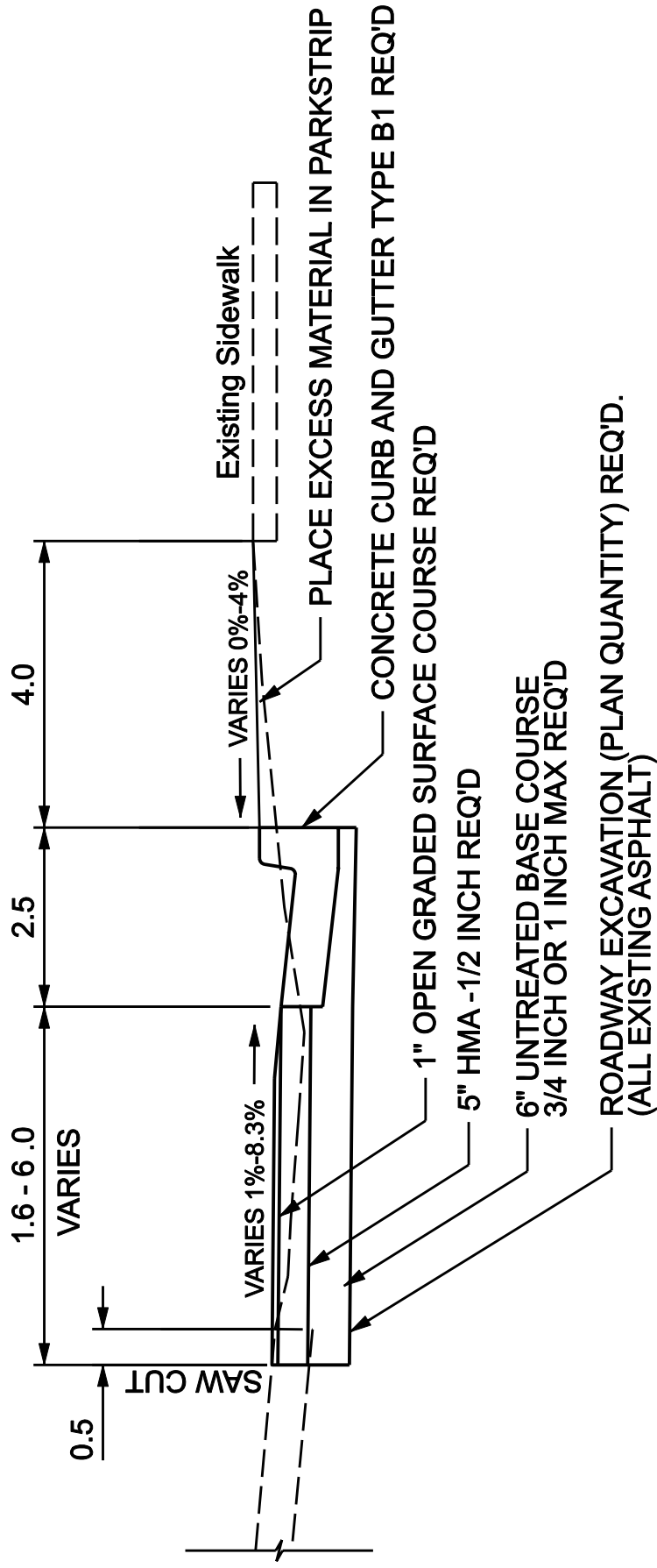


## NOTES

1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.
2. WIDTHS ARE APPROXIMATE.
3. MATCH EXISTING CROSS SLOPE.

# TYPICAL SECTION #3

SR-203 at 34th Street, Ogden

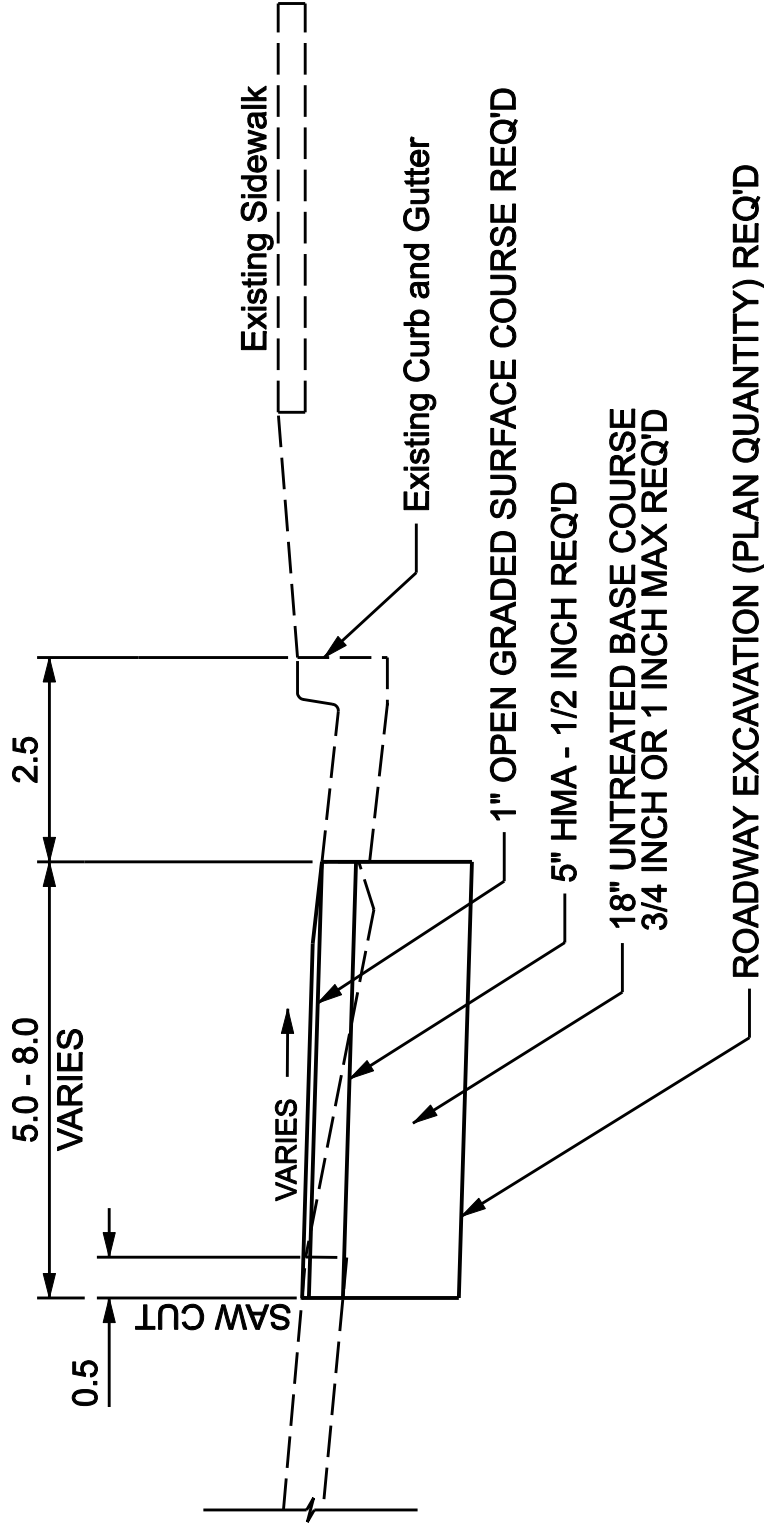


## NOTES

1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.
2. WIDTHS ARE APPROXIMATE.
3. MATCH EXISTING CROSS SLOPE.
4. TOP OF HMA TO BE FLUSH WITH LIP OF GUTTER.

# TYPICAL SECTION #4

SR-203 at 4875 South

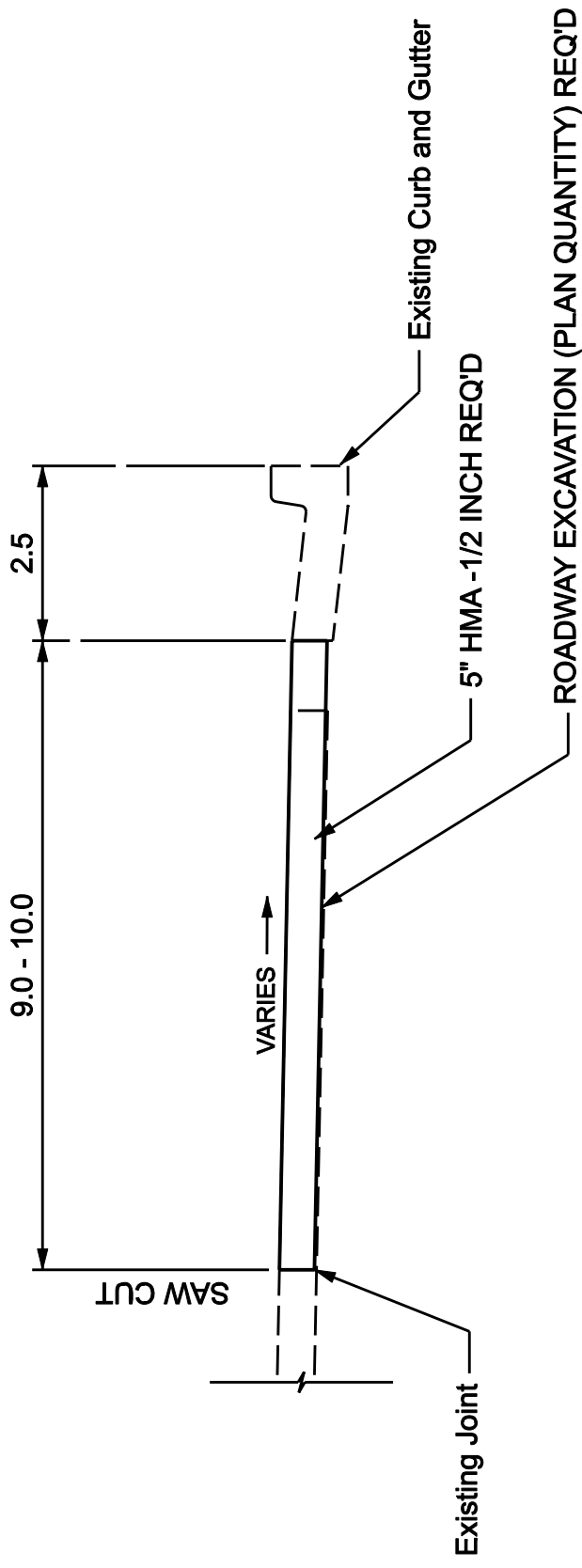


## NOTES

1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.
2. WIDTHS ARE APPROXIMATE.
3. MATCH EXISTING CROSS SLOPE.
4. TOP OF HMA TO BE FLUSH WITH LIP OF GUTTER.

# TYPICAL SECTION #5

SR-66 at 150 North, Morgan

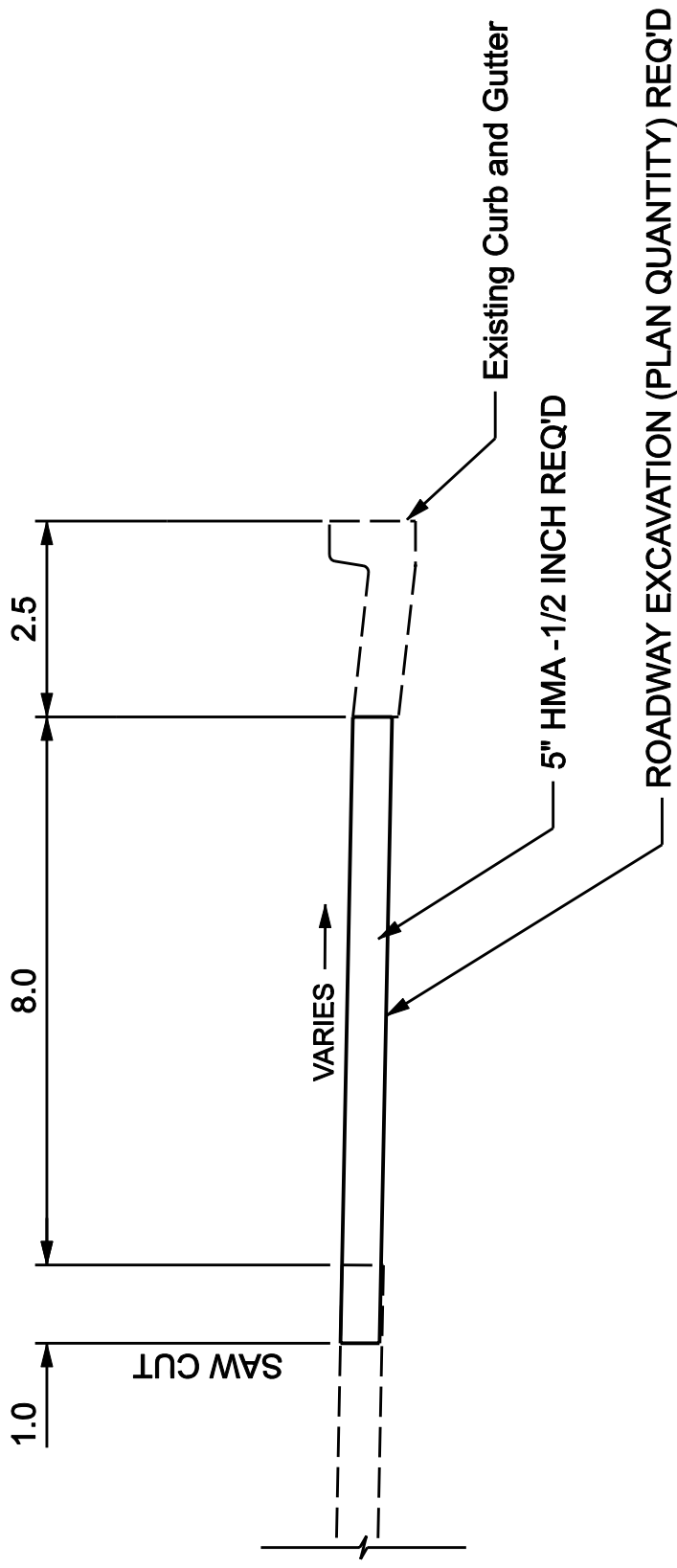


## NOTES

1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.
2. WIDTHS ARE APPROXIMATE.
3. ROADWAY EXCAVATION (PLAN QUANTITY) INCLUDES REMOVAL OF EXISTING ASPHALT ROADWAY.
4. SAW CUT AT EXISTING JOINT LOCATED APPROX. 9.0 - 10.0 FEET FROM LIP OF GUTTER.
5. MATCH EXISTING CROSS SLOPE.

# TYPICAL SECTION #6

SR-66 at 370 South, Morgan



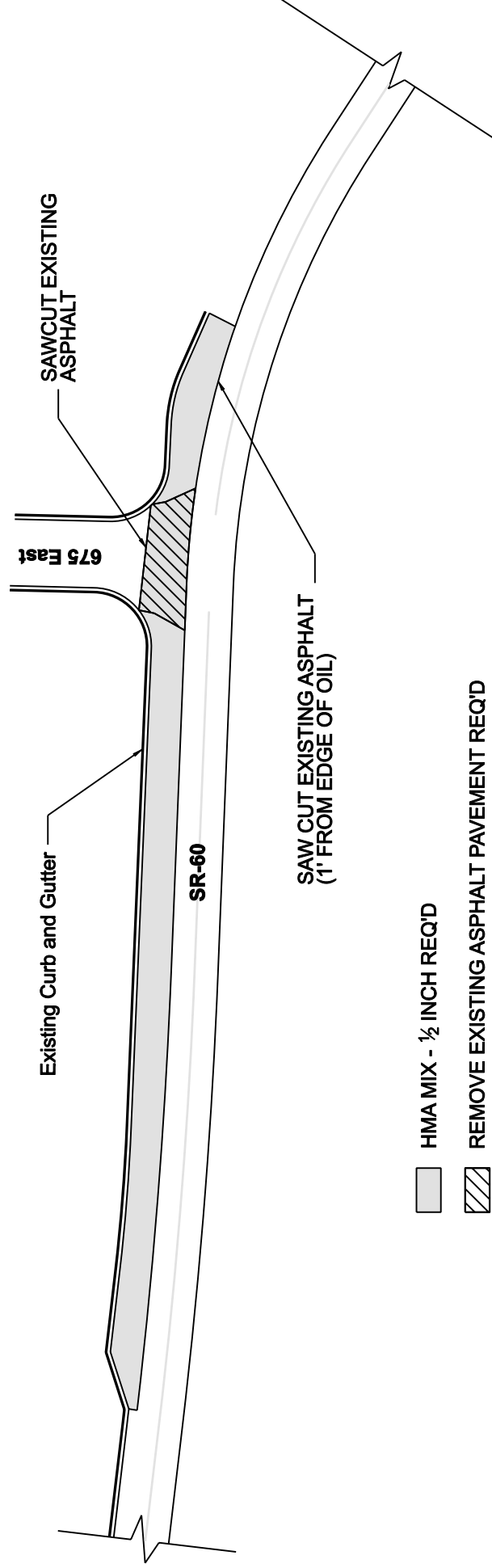
## NOTES

1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.
2. WIDTHS ARE APPROXIMATE.
3. MATCH EXISTING CROSS SLOPE.

# DETAIL SHEET #1

## SR-60 at 675 East

R.P. 3.79 to R.P. 3.89

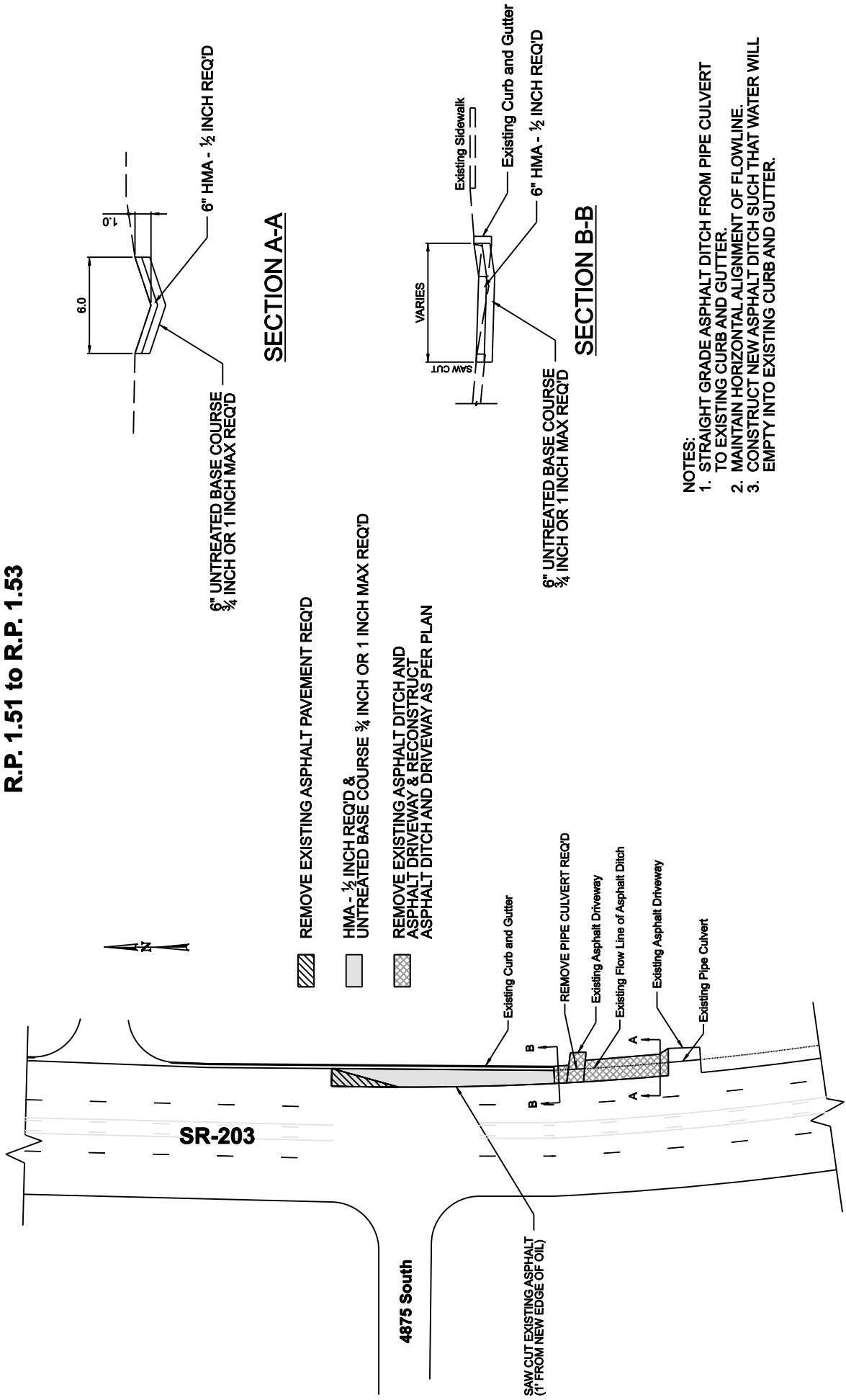


- NOTES:
1. ROADWAY EXCAVATION (PLAN QUANTITY) INCLUDES REMOVAL OF EXCESS UNTREATED BASE COURSE AND EXISTING ASPHALT
  2. TACK COAT SAW CUT EDGES PRIOR TO PAVING.

# DETAIL SHEET #2

SR-203 at 4875 South

R.P. 1.51 to R.P. 1.53

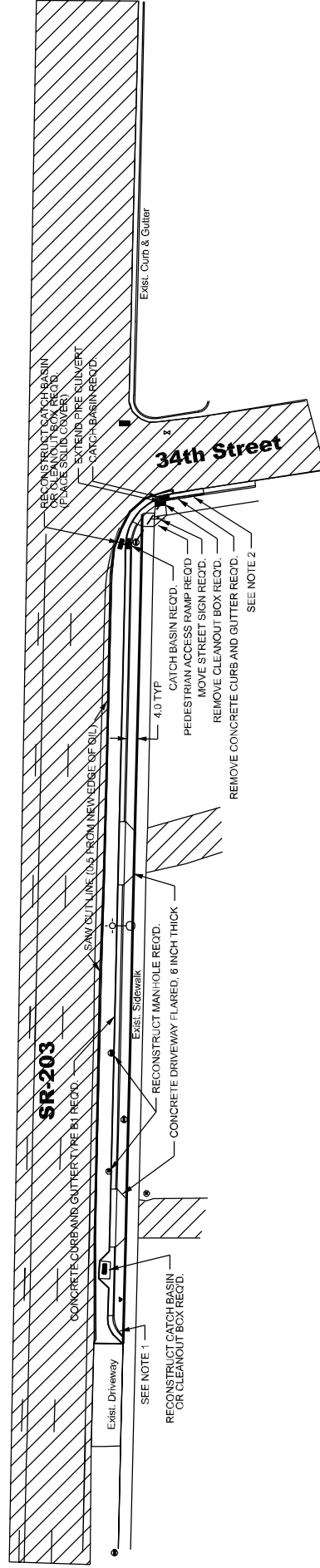


## NOTES:

1. STRAIGHT GRADE ASPHALT DITCH FROM PIPE CULVERT TO EXISTING CURB AND GUTTER.
2. MAINTAIN HORIZONTAL ALIGNMENT OF FLOWLINE.
3. CONSTRUCT NEW ASPHALT DITCH SUCH THAT WATER WILL EMPTY INTO EXISTING CURB AND GUTTER.



## R.P. 3.30 to R.P. 3.36



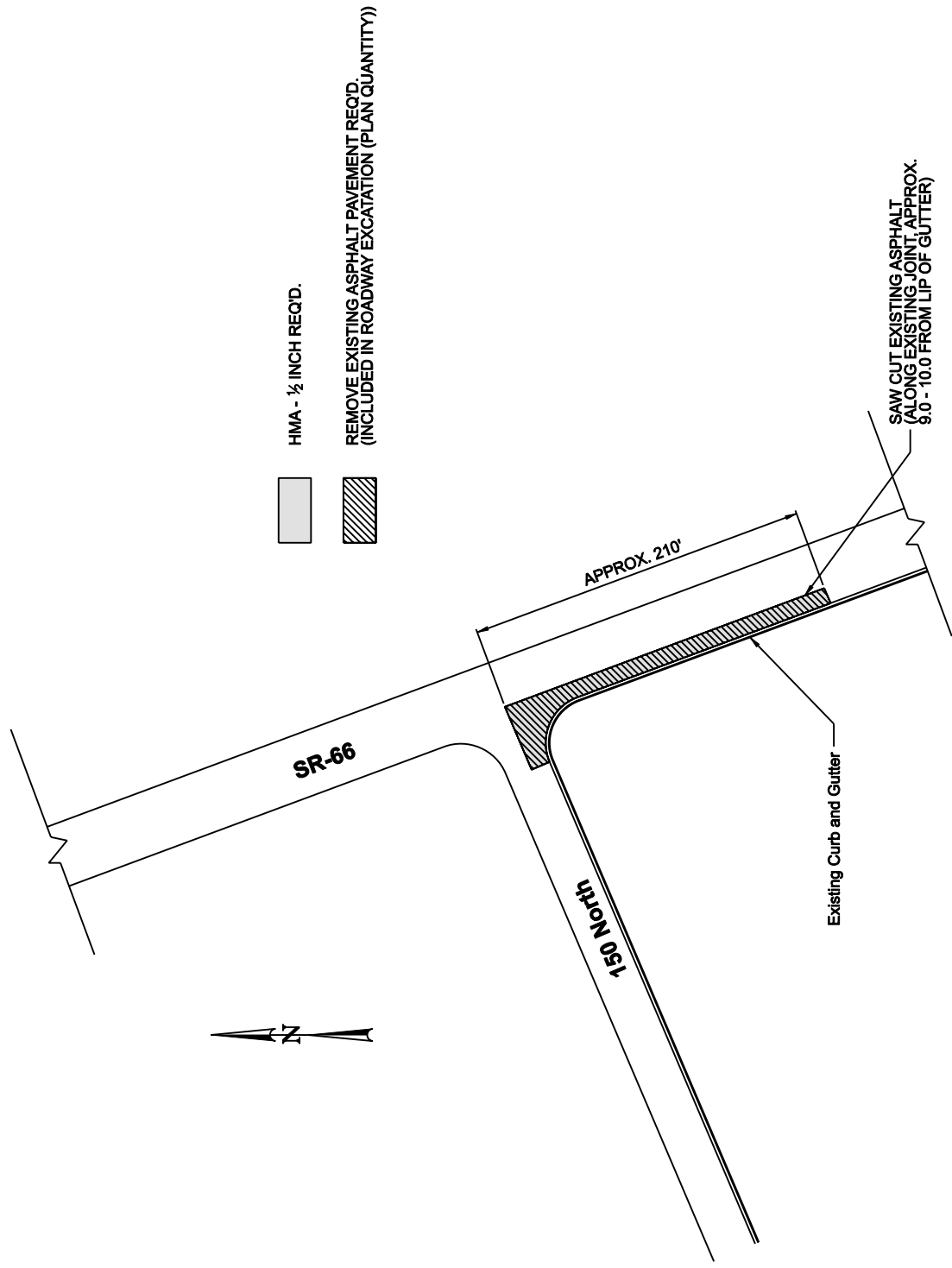
STATION	OFFSET	LIP OF GUTTER ELEVATION	COMMENTS
0+00.00	0.00	100.00	BEGIN RADIUS
0+11.29	6.50 LT	99.18	END RADIUS
0+39.21	6.50 LT	97.87	
0+62.74	6.50 LT	96.84	
1+00.00	6.50 LT	95.38	
1+40.00	6.50 LT	93.98	
1+86.96	6.50 LT	92.28	
2+00.00	6.50 LT	91.80	
2+12.25	6.50 LT	91.41	
2+50.00	6.50 LT	90.17	
3+00.00	6.50 LT	88.54	
3+24.16	6.50 LT	87.60	BEGIN RADIUS

- NOTES:
1. TRANSITION CURB AND GUTTER IN RADIUS TO MATCH FLUSH WITH SIDEWALK.
  2. INCREASE DEPTH OF CURB AND GUTTER FLOWLINE FROM EASTERLY TIE-IN TO CATCH BASIN.

# DETAIL SHEET #4

SR-66 at 150 North, Morgan

R.P. 12.89 to R.P. 12.93



## X. Standard Drawings Index

STANDARD DRAWINGS INDEX (Change 1, Dated 03/14/05)

### UTAH DEPARTMENT OF TRANSPORTATION

U	NUMBER	TITLE	CURRENT DATE
		<b>Advanced Traffic Management System (AT)</b>	
	AT 1	Legend Sheet	<b>02/24/05</b>
	AT 2	Ramp Meter Details	<b>02/24/05</b>
	AT 3	Ramp Meter Sign Panel	<b>02/24/05</b>
	AT 4	Typical Ramp Meter Signal Head Mounting	01/01/05
	AT 5	Ramp Meter Loop Installation	<b>02/24/05</b>
	AT 6	Conduit Details	<b>02/24/05</b>
	AT 7	Polymer-Concrete Junction Box Details	<b>02/24/05</b>
	AT 8	ATMS Cabinet	<b>02/24/05</b>
	AT 9	ATMS Cabinet Disconnect And Transformer Frame	<b>02/24/05</b>
	AT 10	CCTV Mounting Details	<b>02/24/05</b>
	AT 11	CCTV Pole Details	<b>02/24/05</b>
	AT 12	CCTV Pole Foundation For Dedicated CCTV Pole	<b>02/24/05</b>
	AT 13	Not Used	
	AT 14	Weigh In Motion Piezo Details	<b>02/24/05</b>
	AT 15	RWIS Site And Foundation Details	<b>02/24/05</b>
	AT 16	RWIS Tower Base And Service Pad Layout	<b>02/24/05</b>
	AT 17	Ground Rod Installation And Tower Grounding	<b>02/24/05</b>
	AT 18	TMS Detection Zone Layout	<b>02/24/05</b>
		<b>Barriers (BA)</b>	
	BA 1A	Precast Concrete Full Barrier Standard Section	01/01/05
	BA 1B	Precast Concrete Full Barrier Standard Section	01/01/05
	BA 1C	Precast Concrete Barrier Terminal For Speed ≤ 40 MPH	01/01/05
	BA 1D	Precast Concrete Full Section Median Installation	01/01/05
	BA 1E	Precast Concrete Full Section Shoulder Applications	01/01/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
	BA 2	Precast Concrete Half Barrier Standard Section	01/01/05
	BA 3A	Cast In Place Constant Slope Barrier	<b>02/24/05</b>
	BA 3B	Precast Concrete Constant Slope Transition Section For Crash Cushion And W-Beam Guardrail	<b>02/24/05</b>
	BA 4A	W-Beam Guardrail Hardware	01/01/05
	BA 4B	W-Beam Guardrail Transition	<b>02/24/05</b>
	BA 4C	W-Beam Guardrail Transition Curb Section	<b>02/24/05</b>
	BA 4D	W-Beam Guardrail Anchor Type I	01/01/05
	BA 4E	W-Beam Guardrail Installations	01/01/05
	BA 4F	W-Beam Guardrail Typical Divided Roadways	01/01/05
	BA 4G	W-Beam Guardrail Typical Multilane Arterial	01/01/05
	BA 4H	W-Beam Guardrail Typical 2 Lane 2 Way	01/01/05
	BA 4I	W-Beam Guardrail Buried In Backslope Terminal	01/01/05
	BA 4J	W-Beam Guardrail Buried In Backslope Terminal With Rub Rail	01/01/05
	BA 4K	W-Beam Guardrail Buried In Backslope Terminal Anchor	01/01/05
	BA 4L	W-Beam Guardrail Curve Details	01/01/05
	BA 4M	W-Beam Guardrail Nested Guardrail 12' 6" Span	01/01/05
	BA 4N	W-Beam Guardrail Nested Guardrail 18' 9" Span	01/01/05
	BA 4O	W-Beam Guardrail Nested Guardrail 25' Span	01/01/05
	BA 4P	W-Beam Guardrail With Precast Barrier For Span > 25'	01/01/05
		<b>Catch Basins And Cleanouts (CB)</b>	
✓	CB 1	Curb and Gutter Inlet	01/01/05
	CB 2	Open Curb Inlet	01/01/05
	CB 3	Shallow Catch Basin	01/01/05
	CB 4	Open Curb Shallow Catch Basin	01/01/05
✓	CB 5A	Standard Catch Basin and Cleanout Box	01/01/05
✓	CB 5B	Standard Catch Basin and Cleanout Box Section	01/01/05
	CB 6A	Drop Inlet Type "A"	01/01/05
	CB 6B	Berm Apron With Drop Inlet Type "A"	01/01/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
	CB 7A	Drop Inlet Type "B"	01/01/05
	CB 7B	Normal Apron With Drop Inlet Type "B"	01/01/05
	CB 8A	Double Catch Basin	01/01/05
	CB 8B	Double Catch Basin	01/01/05
✓	CB 9A	Standard Catch Basin And Cleanout Box Situation And Layout	01/01/05
✓	CB 9B	Standard Catch Basin And Cleanout Box Section Details	01/01/05
	CB 9C	Standard Catch Basin And Cleanout Box Schedule Of Installation 18" to 42" RCP 12" to 48" CMP	01/01/05
	CB 9D	Standard Catch Basin And Cleanout Box Schedule Of Installation 48" to 66" RCP 60" to 78" CMP	01/01/05
✓	CB 10A	Standard Catch Basin And Cleanout Box Situation And Layout	01/01/05
✓	CB 10B	Standard Catch Basin And Cleanout Box Section Details	01/01/05
	CB 10C	Standard Catch Basin And Cleanout Box Schedule Of Installation 42" to 60" RCP 48" to 72" CMP	01/01/05
	CB 11	Standard Manhole	01/01/05
		<b>Crash Cushions (CC)</b>	
	CC 1	Crash Cushion Markings	01/01/05
	CC 2	Crash Cushion Drainage Details Guideline A	01/01/05
	CC 3	Crash Cushion Drainage Details Guideline B	01/01/05
	CC 4	Details For Placement Crash Cushions Type A, B, And D	01/01/05
	CC 5	Grading And Placement Details Crash Cushion Type C	01/01/05
	CC 6	Crash Cushion Type E Sand Barrel Details	01/01/05
	CC 7A	Grading And Installation Details Crash Cushion Type F Quad Trend 350	02/24/05
	CC 7B	Reserved For Future Use	
	CC 8A	Grading And Installation Details Crash Cushion Type G	02/24/05
	CC 8B	Grading And Installation Details For "3R" Projects Crash Cushion Type G	02/24/05
	CC 9A	Grading And Installation Details Crash Cushion Type H	02/24/05
	CC 9B	Grading And Installation Details Crash Cushion Type H (Parabolic Flare)	02/24/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
		<b>Diversion Boxes (DB)</b>	
	DB 1A	Standard Diversion Box/Cover Plate/Grating For 18” DIA. or 24” DIA. Pipe	01/01/05
	DB 1B	Standard Diversion Box Hinged Lid Details For 18” DIA. or 24” DIA. Pipe	01/01/05
	DB 1C	Standard Diversion Box Bicycle - Safe Grating Details For 18” DIA. or 24” DIA. Pipe	01/01/05
	DB 1D	Standard Diversion Box Three Gate Box Sections For 18” DIA. or 24” DIA. Pipe	01/01/05
	DB 1E	Standard Diversion Box Three Gate Box Sections For 18” DIA. or 24” DIA. Pipe	01/01/05
	DB 1F	Standard Diversion Box Three Gate Box Sections For 18” DIA. or 24” DIA. Pipe	01/01/05
	DB 2A	Standard Diversion Box w/Interchangeable Walls, Bottom Slab, Walls And Apron Details	01/01/05
	DB 2B	Standard Diversion Box w/Interchangeable Walls, Quantities Schedule	01/01/05
	DB 2C	Standard Diversion Box w/Interchangeable Walls, Hand Slide Gate Details	01/01/05
	DB 2D	Standard Diversion Box Type “G” Hand Slide Gate Details	01/01/05
	DB 2E	Standard Diversion Box Hinged Lid (Solid Cover Plate) Type “A” Details Type I Plan	01/01/05
	DB 2F	Standard Diversion Box Hinged Lid (Solid Cover Plate) Type “A” Details Type II Plan	01/01/05
	DB 2G	Standard Diversion Box Hinged Lid Solid Cover Type “B” Details	01/01/05
	DB 2H	Standard Diversion Box Hinged Lid Solid Cover Type “B” And “C” Details	01/01/05
	DB 3A	Standard Diversion Box With Manhole Cover Situation And Layout	01/01/05
	DB 3B	Standard Diversion Box With Manhole Cover Up To 42” RCP And Up To 54” CMP	01/01/05
	DB 3C	Standard Diversion Box With Manhole Cover 48” to 72” RCP And 60” to 84” CMP	01/01/05
	DB 4	Standard Transition Concrete Lined Ditch To Pipe Or Diversion Box	01/01/05
		<b>Design Drawings (DD)</b>	
	DD 1	Superelevation And Widening	01/01/05
	DD 2	Surface Ditch, Benched Slope, And Cut Ditch Details	01/01/05
	DD 3	Climbing Lanes	01/01/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
	DD 4	Geometric Design for Freeways (Roadway)	<b>02/24/05</b>
	DD 5	Entrance And Exit Ramps At Crossroads	01/01/05
	DD 6	Entrance And Exit Ramp Geometrics	01/01/05
	DD 7	Freeway Crossover	01/01/05
	DD 8	Structural Geometric Design Standards For Clearances	01/01/05
	DD 9	Structural Geometric Design Standards	01/01/05
	DD 10	Railroad Clearances At Highway Overpass Structures	01/01/05
	DD 11	Rural Multi Lane Highways Other Than Freeways	01/01/05
	DD 12	Rural Two Lane Highways	01/01/05
	DD 13	Frontage And Access Roads (Under 50 ADT)	01/01/05
	DD 14	Typical Rural 2 Lane Road With Median Lane And Deceleration Lane For Intersecting Crossroads	01/01/05
		<b>Drainage (DG)</b>	
	DG 1	Fill Height for Metal Pipe (Steel)	01/01/05
	DG 2	Fill Height for Metal Pipe (Aluminum)	01/01/05
	DG 3	Maximum Fill Height For HDPE And PVC Pipes	01/01/05
✓	DG 4	Pipe Minimum Cover	01/01/05
✓	DG 5	Plastic Pipe, Metal Pipe Or Pipe Arch Culvert Bedding	01/01/05
	DG 6	Precast Concrete Pipe Culvert	01/01/05
	DG 7	Gasketed Joints Or Coupling Bands For CMP	01/01/05
	DG 8	Metal Culvert End Section	01/01/05
✓	DG 9	Miscellaneous Pipe Details	01/01/05
		<b>Environmental Controls (EN)</b>	
	EN 1	Temporary Erosion Control (Check Dams)	01/01/05
	EN 2	Temporary Erosion Control (Silt Fence)	01/01/05
	EN 3	Temporary Erosion Control (Slope Drain And Temporary Berm)	01/01/05
	EN 4	Temporary Erosion Control (Drop Inlet Barriers)	01/01/05
	EN 5	Temporary Erosion Control (Sediment Trap And Curb Inlet Barrier)	01/01/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
		<b>Fence And Gates (FG)</b>	
	FG 1A	Right Of Way Fence And Gates (Wood Post)	01/01/05
	FG 1B	Right Of Way Fence And Gates (Wood Post)	01/01/05
	FG 2A	Right Of Way Fence And Gates (Metal Post)	01/01/05
	FG 2B	Right Of Way Fence And Gates (Metal Post)	01/01/05
	FG 3	Swing Gates Type I For Gates Less Than 17'	<b>02/24/05</b>
	FG 4	Deer Gates	01/01/05
	FG 5	Swing Gates Type II For Gates Wider Than 17'	01/01/05
	FG 6	Chain Link Fence	01/01/05
		<b>Grates, Frames, And Trash Racks (GF)</b>	
	GF 1	Manhole Frame And Grated Cover	01/01/05
	GF 2	Manhole Frame And Solid Cover	01/01/05
	GF 3	Rectangular Grate And Frame	01/01/05
	GF 4	Directional Flow Grate And Frame	01/01/05
✓	GF 5	Solid Cover And Frame	01/01/05
	GF 6	Manhole Steps	01/01/05
	GF 7	Standard Screw Gate And Frame	01/01/05
	GF 8	2' x 2' Grate And Frame	01/01/05
	GF 9	28" x 24" Directional Flow Grate And Frame	01/01/05
	GF 10	Standard Trash Racks 90 ° X-ing Angle	01/01/05
	GF 11	Standard Trash Racks	01/01/05
	GF 12	Standard Trash Racks	01/01/05
	GF 13	Open Curb Inlet Grate and Frame	01/01/05
	GF 14	Solid Cover For Std Dwg DB 1 MS-18 Loading	01/01/05
	GF 15	Standard Screw Gate And Frame	01/01/05
		<b>General Road Work (GW)</b>	
	GW 1	Raised Median And Plowable End Section	01/01/05
✓	GW 2	Concrete Curb And Gutter	01/01/05
✓	GW 3	Concrete Curb And Gutter Details	01/01/05



State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
✓	GW 4	Concrete Driveways And Sidewalks	01/01/05
✓	GW 5A	Pedestrian Access	01/01/05
✓	GW 5B	Pedestrian Access	01/01/05
✓	GW 5C	Pedestrian Access	01/01/05
	GW 6	Right Of Way Marker	01/01/05
	GW 7	Newspaper And Mailbox Stop Layout	01/01/05
	GW 8	Newspaper And Mailbox Support Hardware	01/01/05
	GW 9	Delineation Hardware	01/01/05
	GW 10	Delineation Application	01/01/05
	GW 11	Sidewalks And Shoulders On Urban Roadways	01/01/05
		<b>Paving (PV)</b>	
	PV 1	Joints For Highways With Concrete Traffic Lanes And Shoulders	01/01/05
	PV 2	Pavement/Approach Slab Details	01/01/05
	PV 3	Concrete Pavement Details For Urban And Interstate	01/01/05
	PV 4	Concrete Pavement Details For Urban And Interstate	01/01/05
	PV 5	Urban Concrete Pavement Details	01/01/05
	PV 6	Rumble Strips	01/01/05
	PV 7	Rumble Strips - Typical Application	01/01/05
	PV 8	Note Used	
	PV 9	Dowel Bar Retrofit	01/01/05
		<b>Signals (SL)</b>	
	SL 1A	Traffic Signal Mast Arm Pole And Luminaire Extension	01/01/05
	SL 1B	Traffic Signal Mast Arm Pole And Luminaire Extension	01/01/05
	SL 2	Traffic Signal Mast Arm Details 30' Thru 75'	01/01/05
	SL 3	Underground Service Pedestal Details	01/01/05
	SL 4	Traffic Signal Mast Arm Pole Foundation	01/01/05
	SL 5	Traffic Signal Pole	01/01/05
	SL 6	Pole Mounted Power Source Details	01/01/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
	SL 7	Span Wire Signal Pole Details	01/01/05
	SL 8	Signal Head Details	01/01/05
	SL 9	Pedestrian Signal Assembly	01/01/05
	SL 10	Traffic Signal Controller Base Details	01/01/05
	SL 11	Traffic Signal Loop Detector Details	01/01/05
	SL 12	Traffic Counting Loop Detector Details	01/01/05
	SL 13	Not Used	
	SL 14	Highway Luminaire Pole Ground Mount	01/01/05
	SL 15	Luminaire Slip Base Details	01/01/05
	SL 16	Highway Luminaire Pole Barrier Mount	01/01/05
	SL 17	Highway Luminaire Pole Foundation Extension	01/01/05
	SL 18	Single Transformer Substation Details	01/01/05
		<b>Signs (SN)</b>	
	SN 1	Bridge Load Limits Signs	01/01/05
	SN 2	School Speed Limit Assembly	01/01/05
	SN 3	Overhead School Speed Limit Assembly	01/01/05
	SN 4	Flashing Stop Sign	01/01/05
	SN 5	Typical Installation For Milepost Signs	01/01/05
	SN 6	Speed Reduction Sign Sequence	01/01/05
✓	SN 7	Placement of Ground Mounted Signs	01/01/05
✓	SN 8	Ground Mounted Timber Sign Post (P1)	01/01/05
	SN 9	Ground Mounted Tubular Steel Sign Post (P2)	01/01/05
	SN 10	Ground Mounted Square Steel Sign Post (P3)	01/01/05
	SN 11	Slipbase Ground Mounted Tubular Steel Sign Post (P4)	01/01/05
✓	SN 12A	Ground Mounted Sign Installation Details	01/01/05
	SN 12B	Ground Mounted Sign Installation Details	01/01/05
	SN 12C	Ground Mounted Sign Installation Details	01/01/05
		<b>Striping (ST)</b>	
	ST 1	Object Markers "T" Intersection And Pavement Transition Guidance	01/01/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
	ST 2	Freeway Crossover Markings	01/01/05
	ST 3	Typical Pavement Markings	01/01/05
	ST 4	Crosswalks, Parking And Intersection Approaches	01/01/05
	ST 5	Painted Median And Auxiliary Lane Details	<b>02/24/05</b>
	ST 6	Passing/Climbing Lanes Traffic Control	01/01/05
	ST 7	Pavement Markings And Signs At Railroad Crossing	01/01/05
	ST 8	Plowable Pavement Markers	01/01/05
	ST 9	School Crossing And School Message	01/01/05
		<b>Structures And Walls (SW)</b>	
	SW 1A	Welded End Guard Unit	01/01/05
	SW 1B	Precast Concrete Cattle Guard	01/01/05
	SW 2	Noise Wall Placement Area	01/01/05
	SW 3A	Precast Concrete Noise Wall 1 Of 2	01/01/05
	SW 3B	Precast Concrete Noise Wall 2 Of 2	01/01/05
	SW 4A	Precast Concrete Retaining/Noise Wall 1 Of 2	01/01/05
	SW 4B	Precast Concrete Retaining/Noise Wall 2 Of 2	01/01/05
		<b>Traffic Control (TC)</b>	
✓	TC 1A	Construction Zone Channelization Devices	01/01/05
✓	TC 1B	Construction Zone Signing	01/01/05
✓	TC 2A	Traffic Control General	01/01/05
✓	TC 2B	Traffic Control General	01/01/05
✓	TC 3	Traffic Control Project Limit Signing	01/01/05
✓	TC 4	Traffic Control Urban Intersections With Roadways Under 50 MPH	01/01/05
✓	TC 5	Traffic Control Urban Intersections With Roadways Under 50 MPH	01/01/05
✓	TC 6	Traffic Control Pedestrian Routing	01/01/05
	TC 7	Traffic Control Road Closed, Detour	01/01/05
✓	TC 8	Traffic Control Lane Closure	01/01/05
✓	TC 9	Traffic Control Multilane Closure	01/01/05

State Projects With 8 ½ x 11 Plan Sheets

U	NUMBER	TITLE	CURRENT DATE
	TC 10	Traffic Control Expressway And Freeway Crossover/Turn Around	01/01/05
	TC 11	Traffic Control Exit Ramp Gore	01/01/05
	TC 12	Traffic Control Entrance Ramp Gore	01/01/05
	TC 13	Traffic Control Shoulder-Haul Road	01/01/05
✓	TC 14	Traffic Control Flagging Operation	01/01/05
	TC 15	Traffic Control 2 Lane/2 Way Seal Coat With Cover Material	01/01/05
	TC 16	Traffic Control Pavement Marking	01/01/05

## **XI. Equal Opportunity (State Projects)**

### **Selection of Subcontractors, Service Providers, Procurement of Materials and Leasing of Equipment:**

Do not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

Notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, have equal opportunity to compete for and perform subcontracts that the contractor enters into pursuant to this contract. Use best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Obtain lists of DBE construction firms from SHA personnel.

Use best efforts to ensure subcontractor compliance with their EEO obligations.

### **Selection of Labor:**

During the performance of this contract, do not discriminate against labor from any other State, possession, or territory of the United States.

### **Employment Practices:**

During the performance of this contract, the Contractor agrees as follows:

Do not discriminate against any employee or applicant for employment because of race, religion, sex, color, national origin, age, or disability. Take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, sex, color, national origin, age, or disability. Such action includes, but is not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Agree to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Department of Transportation setting forth the provisions of this nondiscrimination clause.

In all solicitations or advertisements for employees state that all qualified applicants receive consideration for employment without regard to race, religion, sex, color, national origin, age, or disability.

## State Projects With 8 ½ x 11 Plan Sheets

Send to each labor union or representative of workers that the Contractor has a collective bargaining agreement or other contract or understanding, a notice to be provided by the State Department of Transportation advising the said labor union or worker' representative of the commitments under this section and post copies of the notice in conspicuous places available to employees and applicants for employment.

In the event of noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further State contracts.

Include the provisions of this Section in every subcontract or purchase order so that such provision will be binding upon each Subcontractor or vendor. Take such action with respect to any subcontract or purchase order as the State Department of Transportation may direct as a means of enforcing such provisions including sanctions for noncompliance.

April 8, 2005

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 00555M**

**PROSECUTION AND PROGRESS**

**Add the following to paragraph A of 1.9 LIMITATION OF OPERATIONS:**

1. Do not allow traffic delays to exceed 15 minutes. Open all lanes of traffic during non-working hours.
2. Complete project no later than June 30, 2005.
3. At location SR-66, R.P. 12.89 to R.P. 12.93, curb and gutter work is being performed through a non-UDOT contract and is not complete. If the curb and gutter work is not completed, the DEPARTMENT reserves the right to eliminate this section of the project with no price adjustments.

March 29, 2005

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 00725M**

**SCOPE OF WORK**

**Add the following to 1.3 INTENT OF CONTRACT:**

B. This project will include the following items of work:

1. Place HMA – ½ inch between existing edge of asphalt and curb and gutter.
2. Place Concrete Curb and Gutter Type B1 and Concrete Driveways on SR-203 at 34<sup>th</sup> Street.
3. Reconstruct catch basins and manholes.
4. Upgrade Pedestrian Access Ramp.

**Add the following to article 1.18 Paragraph C:**

1. The Department does not accept VE proposals related to pavement section structure, strength or performance.

**Delete article 1.18 Paragraph D and replace with the following:**

- D. The Department rejects proposals that provide equivalent options to those already in the contract.



**Delete article 1.18 Paragraphs E – I and replace with the following:**

- E. The Department may reject proposals that:
  - 1. Contain revisions the Department is already considering or has approved for the Contract.
  - 2. Do not generate sufficient savings.
  - 3. Do not provide additional information as requested by the Department including requests for field investigation results and surveys, design computations, and field change sheet for proposed design changes.
- F. If the proposal is rejected, the Contractor has no claim to additional costs or delays, including development costs, loss of anticipated profits, or increased material or labor costs.
- G. The Engineer can reject all unsatisfactory work resulting from an approved proposal.
  - 1. Remove rejected work and reconstruct under the original contract provisions at no additional cost to Department.
  - 2. Reimbursement for modifications to the proposal to adjust field or other conditions is limited to the total amount of the contract bid prices.
  - 3. Rejection or limitation of reimbursement is not basis for any claim against the Department.
- H. The Department does not consider savings generated by contingency items when it is reduced as part of a VECP, unless it can be tied to a reduction in contract time.

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 00820M**

**LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

**Delete Article 1.16 and replace with the following:**

**1.16 INSURANCE REQUIREMENTS**

- A. Workers' Compensation Insurance
  - 1. Provide Workers' Compensation Insurance to cover full liability. As a minimum, comply with the statutory limits defined by the State of Utah.
- B. General Liability Insurance
  - 1. Provide General Liability insurance with the following minimum limits of liability:
    - a. \$1,000,000 Bodily Injury and Property Damage – Each Accident
    - b. \$2,000,000 General Aggregate
    - c. \$2,000,000 Products and Complete Operations Annual Aggregate
- C. Excess General Liability Insurance
  - 1. Provide Excess Liability Insurance with the following minimum limits:
    - a. \$1,000,000 Each Claim
- D. Automobile Liability Insurance
  - 1. Provide Automobile Liability Insurance for claims arising from the ownership, maintenance, or use of motor vehicles involved in project work with the following minimum limits:
    - a. \$1,000,000 Combined single Limit Bodily Injury and Property Damage per Occurrence
- E. Provide the following for all required liability insurance policies:
  - 1. Where and when applicable, name as insured, only in respect to work to be performed under this Contract, the State of Utah and all institutions, agencies, departments, authorities, and instrumentalities, and while acting within the scope of their duties, all volunteers as well as members of governing bodies, boards, commissions, and advisory committees.
  - 2. Coverage for the above insured is primary and not contributing.

3. Incorporate into the insurance policy this statement: "Insurance coverage is extended to include claims reported up to one year beyond the date of substantial completion of this Contract."
- F. Provide UDOT with certificates of insurance showing coverage as required above at the time the contract is executed and maintain the policy in force during the entire period of the Contract. The certificates will also state that the policies required are endorsed to give UDOT (the Engineer) not less than 30 days prior notice in the event of cancellation or change in coverage.
- G. Regardless of the Contractor insurance requirements required in this section, insolvency, bankruptcy, or failure of any insurance company to pay all claims accrued does not relieve Contractor of any obligations.
- H. Endorse all policies to include waivers of subrogation in favor of UDOT.

March 29, 2005

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 01315M**

**PUBLIC INFORMATION SERVICES**

**Add the following to 1.4 PUBLIC INFORMATION MANAGER (PIM) RESPONSIBILITIES:**

- H. Fax a copy of the public information flyer to Bill Gooch, Project Manager, fax number: (801) 620-1676, Andy Neff, Region One Public Information Officer, fax number: (801) 620-1665 and Wayne Felix, Resident Engineer, fax number (801) 620-1676, prior to proceeding with work.

**Add the following to 3.1 ESTABLISH LOCAL PUBLIC INFORMATION SERVICES:**

- L. Erect signs with the CONTRACTOR's public information office phone number according to Standard Drawings TC-1B and TC-3.

END OF SECTION

April 8, 2005

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 01892M**

**RECONSTRUCT CATCH BASIN, CLEANOUT, METER,  
VALVE, MANHOLE, AND MONUMENT BOXES**

**Add the following to 1.1 SECTION INCLUDES:**

- B. Lower catch basins, cleanout, meter, valve, manhole and monument boxes before rotomilling and reconstruct top section after paving.

**Add the following subparagraphs to paragraph A of 2.1 CONCRETE:**

1. Minimum 1450 psi within 12 hours and 2030 psi within 24 hours.
2. Maximum water cement ratio 0.4.
3. Minimum 740 lb/yd<sup>3</sup> of cement.
4. Add accelerators (excluding calcium chloride) or plasticizers as necessary to achieve quick set and strength.
5. Add a minimum of 23 lb/yd<sup>3</sup> of steel fiber to increase strength of mix. Poly-fibers may also be included in addition to steel if part of a standard mix design.
6. Steel fiber to be cold drawn with deformed ends 1.2in - 2.4in in length and .02in - .04in in diameter. Minimum steel tensile strength of 120,000 PSI (ASTM 820).

**Add the following to paragraph B of 3.1 RAISE BOXES:**

1. Correctly reference all boxes prior to surfacing.
2. Contact Qwest prior to reconstruction of Qwest manholes. Contact: Jeff Stapley, phone number (801) 974-8150.
3. Reconstruct top section of cleanout box and catch basin using #5 rebar to be tied to existing reinforcing steel with a minimum 6 in. overlap. The existing steel in the structure must be exposed to allow for the required overlap.
4. Schedule work during non-peak traffic hours.

5. Begin adjustment work on only the number of boxes that can be completed in a 24-hour period. (including concrete set to 1450 psi when raising boxes)
6. Notify appropriate utility companies prior to making any adjustments.
7. Contractor shall be responsible for removal of any debris that enters the manhole or catch basin.
8. Cooperate with utility company to allow access to manholes during construction process if necessary.
9. Consolidate concrete using a high frequency internal vibrator.
10. Remove traffic control devices as soon as possible after 1450 psi has been reached or at the direction of the Engineer.
11. Use steel plates as needed to comply with traffic control limitations.

March 30, 2005

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 02612S**

**SMALL STRUCTURES**

**PART I GENERAL**

**1.1 SECTION INCLUDES**

- A. This special provision combines Sections 02635, 03211, and 03310 into one item.
- B. Materials and procedure for constructing catch basins, headwalls, cleanout boxes, diversion boxes, and junction boxes. Including all concrete, reinforcing steel, grates, covers, frames, manhole steps, and other items to furnish a completed drainage feature.

**1.2 RELATED SECTIONS**

- A. Section 02635: Grates, Solid Covers, Frames, and Manhole Steps.
- B. Section 03211: Reinforcing Steel and Welded Wire.
- C. Section 03310: Structural Concrete.

**PART 2 PRODUCTS**

**2.1 MATERIALS**

- A. Refer to the applicable sections listed in 1.2 above for each product used.

**PART 3 EXECUTION**

**3.1 INSTALLATION**

- A. Refer to the applicable section listed in 1.2 above for installation of each product used.

END OF SECTION

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 02742S**

**PROJECT SPECIFIC SURFACING REQUIREMENTS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Required PG Asphalt or emulsion.
- B. Number of gyrations to use for Superpave Mix Design.

**PART 2 PRODUCTS**

**2.1 MIXES**

- A. Hot Mix Asphalt (HMA): (Refer to bid item for size)
  - 1. PG 64-34 Asphalt.
  - 2. N<sub>initial</sub> 8 N<sub>design</sub> 100 N<sub>final</sub> 160
- B. Open-Graded Surface Course:
  - 1. PG 64-34 Asphalt.
- C. Chip Seal
  - 1. Type of asphalt emulsion N/A
- D. Tack Coat
  - 1. Emulsified Asphalt SS-1H, CSS-1, or CSS-1H
  - 2. Diluted 2 – 1

**PART 3 EXECUTION Not used**

END OF SECTION



**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 02745S**

**ASPHALT MATERIAL**

**Delete section 02745 in its entirety and replace with the following:**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Asphalt materials

**1.2 PAYMENT PROCEDURES**

- A. Price adjustments for asphalt cement and liquid asphalt (chip-seal emulsions and/or cut-backs):
  - 1. Standard department procedures governs price adjustments made where asphalt material does not conform to the specifications
    - a. If the price adjustment exceeds 30 percent, the Engineer may order the removal of any or all the defective asphalt material.
    - b. The pay factor for such material is 0.50 when allowed to remain in place.
- B. Price adjustments for Performance Graded Asphalt Binder (PGAB):
  - 1. Standard department PGAB management plan governs price reductions or removal of material where the binder does not conform to the specifications.

**1.3 REFERENCES**

- A. AASHTO M 81: Cut-Back Asphalt (Rapid-Curing Type)
- B. AASHTO M 82: Cut-Back Asphalt (Medium-Curing Type)
- C. AASHTO M 140: Emulsified Asphalt
- D. AASHTO M 208: Cationic Emulsified Asphalt

- E. AASHTO M 226: Viscosity Graded Asphalt Cement
- F. AASHTO M 320: Performance Graded Asphalt Cement
- G. AASHTO R 28: Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)
- H. AASHTO T 44: Solubility of Bituminous Materials
- I. AASHTO T 48: Flash and Fire Points by Cleveland Open Cup
- J. ASHTO T 49: Penetration of Bituminous Materials
- K. AASHTO T 50: Float Test for Bituminous Materials
- L. AASHTO T 51: Ductility of Bituminous Materials
- M. AASHTO T 59: Testing Emulsified Asphalt
- N. AASHTO T 201: Kinematic Viscosity of Asphalts
- O. AASHTO T 228: Specific Gravity of Semi-Solid Bituminous Materials
- P. AASHTO T 240: Effect of Heat and Air on a Moving Film of Asphalt (Rolling Thin-Film Oven Test)
- Q. AASHTO T 300: Force Ductility of Bituminous Materials
- R. AASHTO T 301: Elastic Recovery Test of Bituminous Materials by Means of a Duclilometer
- S. AASHTO T 313: Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)
- T. AASHTO T 314: Determining the Fracture Properties of Asphalt Binder in Direct Tension
- U. AASHTO T 315: Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
- V. AASHTO T 316: Viscosity Determination of Asphalt Binder Using Rotational Viscometer
- W. ASTM D 92: Flash and Fire Points by Cleveland Open Cup

- X. ASTM D 1190: Concrete Joint Sealer, Hot-Applied Elastic Type
- Y. ASTM D 2006-70: Method of Test for Characteristic Groups in Rubber Extender and Processing Oils by the Precipitation Method.
- Z. ASTM D 2007: Characteristic Groups in Rubber Extender and Processing Oils and Other Petroleum-Derived Oils by the Clay-Gel Absorption Chromatographic Method
- AA. ASTM D 2026: Cutback Asphalt (Slow-Curing Type)
- BB. ASTM D 3405: Joint Sealants, Hot-Applied, for Concrete and Asphalt Pavements
- CC. ASTM D 4402: Viscosity Determinations of Unfilled Asphalts Using the Brookfield Thermosel Apparatus
- DD. ASTM D 5329: Sealants and Fillers, Hot-Applied, For Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements
- EE. ASTM D 5801: Toughness and Tenacity of Bituminous Materials
- FF. California Test Methods
- GG. UDOT Materials Manual of Instruction
- HH. UDOT Minimum Sampling and Testing Guide

#### **1.4 SUBMITTALS**

- A. For each shipment of material, supply a vendor-prepared bill of lading showing the following information:
  - 1. Type and grade of material
  - 2. Type and amount of additives, used, if applicable
  - 3. Destination
  - 4. Consignee's name
  - 5. Date of Shipment
  - 6. Railroad car or truck identification
  - 7. Project number
  - 8. Loading temperature
  - 9. Net weight in tons (or net gallons corrected to 60 degrees F, when requested)
  - 10. Specific gravity
  - 11. Bill of lading number
  - 12. Manufacturer of asphalt material

## **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Each shipment of asphalt material must:
  - 1. Be uniform in appearance and consistency.
  - 2. Show no foaming when heated to the specified loading temperature.
- B. Do not supply shipments contaminated with other asphalt types or grades than those specified.

## **1.6 GRADE OF MATERIAL**

- A. The Engineer determines the grade of material to be used based on the supply source designated by the Contractor when the bid proposal lists more than one grade of asphalt material.

## **PART 2 PRODUCTS**

### **2.1 PERFORMANCE GRADED ASPHALT BINDER (PGAB)**

- A. Supply PGABs under the Approved Supplier Certification (ASC) System. Refer to the UDOT Minimum Sampling and Testing Guide, Section 509, Asphalt Binder Management Plan.
- B. As specified in AASHTO M 320 for all PGABs having algebraic differences less than 92 degrees between the high and low design temperatures.
- C. As specified in Tables 1, 2, 3, 4, 5, 6, 7, and 8 for all PGABs having algebraic differences equal to or greater than 92 degrees between the high and low design temperatures.

**Table 1****PG58-34**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@58°C, G*, kPa	1.30 Min.
	@58°C, phase angle, degrees	74.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@5°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	65 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@16°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-24°C, S, MPa	300 Max.
	@-24°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-24°C, Failure Strain, %	1.5 Min.
	@-24°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissor...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 2****PG64-28**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*, kPa	1.30 Min.
	@64°C, phase angle, degrees	74.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	65 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@22°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-18°C, S, MPa	300 Max.
	@-18°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-18°C, Failure Strain, %	1.5 Min.
	@-18°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 3****PG64-34**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*, kPa	1.30 Min.
	@64°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T-240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	70 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@19°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-24°C, S, MPa	300 Max.
	@-24°C, m-value	0.300 Min.
	@-24°C, Failure Strain, %	1.5 Min.
	@-24°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 4****PG70-22**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*, kPa	1.30 Min.
	@70°C, phase angle, degrees	74.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	65 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@28°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-12°C, S, MPa	300 Max.
	@-12°C, m-value	0.300 Min.
	@-12°C, Failure Strain, %	1.5 Min.
	@-12°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 5****PG70-28**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*, kPa	1.30 Min.
	@70°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	70 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@25°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-18°C, S, MPa	300 Max.
	@-18°C, m-value	0.300 Min.
	@-18°C, Failure Strain, %	1.5 Min.
	@-18°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 6****PG70-34**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*, kPa	1.30 Min.
	@70°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135 °C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	75 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@22°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-24°C, S, MPa	300 Max.
	@-24°C, m-value	0.300 Min.
	@-24°C, Failure Strain, %	1.5 Min.
	@-24°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 7**

**PG76-22**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*, kPa	1.30 Min.
	@76°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	70 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@ 31°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-12°C, S, MPa	300 Max.
	@-12°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-12°C, Failure Strain, %	1.5 Min.
	@-12°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 8**

**PG76-28**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*, kPa	1.30 Min.
	@76°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	75 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@28°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-18°C, S, MPa	300 Max.
	@-18°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-18°C, Failure Strain, %	1.5 Min.
	@-18°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		



## 2.2 ASPHALTIC CEMENT, LIQUID ASPHALTS, REJUVENATING AGENTS

- A. As specified in AASHTO M 226, Table 2 with the following modifications:
1. Delete and replace ductility at 77EF (25EC) with ductility at 39.2EF (4EC) with values as detailed below.

<u>AC - 2.5</u>	<u>AC - 5</u>	<u>AC - 10</u>	<u>AC - 20</u>
50+	25+	15+	5+

- B. As specified for cationic and anionic emulsified asphalt.
1. All standard Slow Setting (SS, CSS), Medium Setting (MS, CMS), and Rapid Setting (RS, CRS) grades; inclusive of all High-Float designations (HF).
  2. Supply under the Approved Supplier Certification System (ASC).
  3. Meet AASHTO M 208 and M 140.
- C. Conform to the requirements of one of these tables:
1. Table 9: Cationic Rapid Setting Emulsified Polymerized Asphalt (CRS-2P)
  2. Table 10: Latex Modified Cationic Rapid Setting Emulsified Asphalt (LMCRS-2)
  3. Table 11: Cationic Medium Setting Emulsified Asphalt (CMS-2S)
  4. Table 12: High Float Medium Setting Emulsified Asphalt (HFMS-2)
  5. Table 13: High Float Medium Setting Emulsified Polymerized Asphalt (HFMS-2P)
  6. Table 14: High Float Rapid Setting Emulsified Polymerized Asphalt (HFRS-2P)
  7. Table 15: Cationic Rapid Setting Emulsified Asphalt (CRS-2A, B)
- D. Curing cut-back asphalt:
1. As specified for slow curing (SC) in ASTM D 2026.
  2. As specified for medium curing (MC) in AASHTO M 82.
  3. As specified for rapid curing (RC) in AASHTO M 81.
- E. Conform to requirements for Emulsified Asphalt Pavement Rejuvenating Agent:
1. Table 16: Type A
  2. Table 17: Type B
  3. Table 18: Type B Modified
  4. Table 19: Type C
  5. Table 20: Type D

**Table 9**

<b>Cationic Rapid Setting Emulsified Polymerized Asphalt (CRS-2P)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity , SF, 140EF (60EC), s (Project-site Acceptance/Rejection Limits)	T 59	100	400
Settlement (a) 5 days, percent	T 59		5
Storage Stability Test (b) 1 d, 24 h, percent	T 59		
Demulsibility (c) 35 ml, 0.8% sodium dioctyl Sulfosuccinate, percent	T 59	40	
Particle Charge Test	T 59	Positive	
Sieve Test, percent	T 59		0.10
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent			0
Residue (d), percent		68	
<b>Residue from Distillation Test</b>			
Penetration, 77EF(25EC), 100 g, 5 s, dmm	T 49	80	150
Ductility, 39.2EF(4EC), 5 cm/min, cm	T 51	35	
Toughness, lb-in	ASTM D 5801	75	
Tenacity, lb-in	ASTM D 5801	50	
Solubility in trichloroethylene, percent	T 44	97.5	
<p>(a) The test requirement for settlement may be waived when the emulsified asphalt is used in less than a five-day time; or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than 5 days.</p> <p>(b) The 24-hour (1-day) storage stability test may be used instead of the five-day settlement test.</p> <p>(c) The demulsibility test is made within 30 days from date of shipment.</p> <p>(d) Distillation is determined by AASHTO T 59, with modifications to include a <math>350 \pm 5\text{EF}</math> (<math>177 \pm 3^\circ\text{C}</math>) maximum temperature to be held for 15 minutes.</p> <p>Modify the asphalt cement prior to emulsification.</p>			

**Table 10**

<b>Latex Modified Cationic Rapid Setting Emulsified Asphalt (LMCRS-2)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s (Project Site Acceptance/Rejection Limits)	T 59	140	400
Settlement (a) 5 days, percent	T 59		5
Storage Stability Test (b) 1 d, 24 h, percent	T 59		1
Demulsibility (c) 35 ml, 0.8% sodium dioctyl Sulfosuccinate, percent	T 59	40	
Particle Charge Test	T 59	Positive	
Sieve Test, percent	T 59		0.3
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent			0
Residue (d), percent		65	
<b>Residue from Distillation Test</b>			
Penetration, 77EF (25EC), 100 g, 5 s, dmm	T 49	40	200
Torsional Recovery (e)		18	
<p>(a) The test requirement for settlement may be waived when the emulsified asphalt is used in less than a five-day time; or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than 5 days.</p> <p>(b) May use the 24-hour (1-day) storage stability test instead of the five-day settlement test.</p> <p>(c) Make the demulsibility test within 30 days from date of shipment.</p> <p>(d) Determine distillation by AASHTO T 59, with modifications to include a <math>350 \pm 5</math> EF (177<math>\pm</math>3EC) maximum temperature to be held for 15 minutes.</p> <p>(e) CA 332 (California Test Method)</p>			
<b>Co-mill latex and asphalt during emulsification</b>			

**Table 11**

<b>Cationic Medium Setting Emulsified Asphalt (CMS-2S)</b>		
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Specification</b>
<b>Emulsion</b>		
Viscosity, SF, 122EF (50EC), s	T 59	50 - 450
Percent residue	T 59	60 min
One-day storage stability, percent	T 59	1 max
Sieve, percent	T 59	0.10 max
Particle charge	T 59	Positive
Oil Distillate, percent by volume of emulsion	T 59	5-15
<b>Residue</b>		
Penetration, 77EF (25EC), 100g, 5 sec, dmm	T 59	100-250
Solubility, percent	T 59	97.5 min.

**Table 12**

<b>High Float Medium Setting Emulsified Asphalt ( HFMS-2)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122°F (50°C), s (Project Site Acceptance/Rejection Limits)	T59	70	300
Storage Stability Test, 1d, 24 h, percent	T59		1.0
Sieve Test , percent	T59		0.1
<b>Distillation</b>			
Oil Distillate, by volume of emulsion, percent	T59	NA	NA
Residue, percent	T59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77°F (25°C), 100g, 5 s, dmm	T49	50	200
Float Test, 140°F (60°C), s	T50	1200	
Solubility in Trichloroethylene, percent	T44	97.5	
Ductility, 77°F (25°C) 5cm/min, cm	T51	40	

**Table 13**

<b>High Float Medium Setting Emulsified Polymerized Asphalt (HFMS-2P) (a)</b>			
<b>Tests</b>	<b>AASHTO Test method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s (Project Site Acceptance/Rejection Limits)	T 59	100	450
Storage Stability Test (a) 1 d, 24 h, percent	T 59		0.1
Sieve Test, percent	T 59		0.1
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59	1	7
Residue (c), percent	T 59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77EF (25EC), 100 g, 5 s, dmm	T 49	70	300
Float Test, 140EF (60EC), s	T 50	1200	300
Solubility in trichloroethylene, percent	T 44	97.5	
Elastic Recovery, 77EF (25EC), percent	T 301	50	
<p>(a) Supply an HFMS-2P (anionic, polymerized, high-float) as an emulsified blend of polymerized asphalt cement, water, and emulsifiers. Polymerize the asphalt cement with a minimum of 3.0% polymer by weight of the asphalt cement prior to emulsification. After standing undisturbed for a minimum of 24 hours, the emulsion shall be smooth and homogeneous throughout with no white, milky separation, pumpable, and suitable for application through a distributor.</p> <p>(b) May use the 24-hour (1-day) storage stability test instead of the five-day settlement test.</p> <p>(c) Determine the distillation by AASHTO T 59, with modifications to include a 350± 5EF (177±3EC) maximum temperature to be held for 15 minutes.</p>			

**Table 14**

<b>High Float Medium Setting Emulsified Polymerized Asphalt (HFMS-2SP) (a)</b>			
<b>Tests</b>	<b>AASHTO Test method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s (Project Site Acceptance/Rejection Limits)	T 59	50	450
Storage Stability Test (a) 1 d, 24 h, percent	T 59		0.1
Sieve Test, percent	T 59		0.1
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59	1	7
Residue (c), percent	T 59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77EF (25EC), 100 g, 5 s, dmm	T 49	150	300
Float Test, 140EF (60EC), s	T 50	1200	
Solubility in trichloroethylene, percent	T 44	97.5	
Elastic Recovery, 77EF (25EC), percent	T 301	50	
<p>(a) Supply an HFMS-2SP (anionic, polymerized, high-float) as an emulsified blend of polymerized asphalt cement, water, and emulsifiers. Polymerize the asphalt cement with a minimum of 3.0% polymer by weight of the asphalt cement prior to emulsification. After standing undisturbed for a minimum of 24 hours, the emulsion shall be smooth and homogeneous throughout with no white, milky separation, pumpable, and suitable for application through a distributor.</p> <p>(b) May use the 24-hour (1-day) storage stability test instead of the five-day settlement test.</p> <p>(c) Determine the distillation by AASHTO T 59, with modifications to include a 350± 5EF (177±3EC) maximum temperature to be held for 15 minutes.</p>			

**Table 15**

<b>High Float Rapid Setting Emulsified Polymerized Asphalt (HFRS-2P) (a)</b>			
<b>Tests</b>	<b>AASHTO Test method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF @ 122EF (50EC), s (Project Site Acceptance/Rejection Limits)	T 59	50	450
Storage Stability Test (b) 1 d, 24 h, percent	T 59		1
Demulsibility 0.02 N Ca Cl <sub>2</sub> , percent	T 59	40	
Sieve Test, percent	T 59		0.1
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59		3
Residue (c), percent	T 59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77°F (25EC), 100 g, 5 s, dmm	T 49	70	150
Float Test, 140EF (60EC), s	T 50	1200	
Solubility in trichloroethylene, percent	T 44	97.5	
Elastic Recovery, 77EF (25EC), percent	T 301	58	
<p>(a) Supply an HFMS-2SP (anionic, polymerized, high-float) as an emulsified blend of polymerized asphalt cement, water, and emulsifiers. Polymerize the asphalt cement with a minimum of 3.0% polymer by weight of the asphalt cement prior to emulsification. After standing undisturbed for a minimum of 24 hours, the emulsion shall be smooth and homogeneous throughout with no white, milky separation, pumpable, and suitable for application through a distributor.</p> <p>(b) May use the 24-hour (1-day) storage stability test instead of the five-day settlement test.</p> <p>(c) Determine the distillation by AASHTO T 59, with modifications to include a 350 ± 5EF (177±3EC) maximum temperature to be held for 15 minutes.</p>			

**Table 16**

<b>Cationic Rapid Setting Emulsified Asphalt (CRS-2A,B)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min</b>	<b>Max</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s (Project Site Rejection/Acceptance Limits)	T 59	140	400
Storage stability test, 24 h, percent	T 59		1
Demulsibility, 35 mL 0.8 percent Sodium Dioctyl Sulfosuccinate, percent	T 59	40	
Particle charge test	T 59	Positive	
Sieve test, percent	T 59		0.10
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59		0
Residue, percent	T 59	65	
Use PG58-22 and PG64-22 as base asphalt cement for CRS-2A, B, respectively. Specification for high temperature performance: original and RTFO G*/sin* within 3EC of grade.			



**Table 17**

<b>Emulsified Type A Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77EF (25EC), s	AASHTO T 59	15 Min 40 Max
Residue , percent W (a)	AASHTO T 59	60 Min. 65 Max.
Miscibility Test (b)	AASHTO T-59	No Coagulation
Sieve Test, percent W ( c)	AASHTO T 59	0.20 Max.
5-day Settlement, percent W	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
Light Transmittance , %	UDOT MOI 8-973	30 Max.
Cement Mixing	AASHTO T-59	2 Max.
<b>Residue from Distillation (a)</b>		
Viscosity, 140 °F (60EC), mm <sup>2</sup> /s	ASTM D 4402	150 - 300
Flash Point, COC, EF (EC)	AASHTO T 48	385 Min.
Asphaltenes, percent W	ASTM D 2006-70	0.4 Min. 0.75 Max.
Maltene Distribution Ratio (PC + A <sub>1</sub> )/(S + A <sub>2</sub> ) (d)	ASTM D 2006-70	0.3 Min. 0.6 Max
Saturated Hydrocarbons, S (d)	ASTM D 2006-70	21 Min. 28 Max.
PC/S Ratio (d)	ASTM D 2006-70	1.5 Min.
(a) AASHTO T 59 , Evaporation Test, modified as follows: Heat a 50 gram sample to 300 °F until foaming ceases, then cool immediately and calculate results. (b) AASHTO T 59, modified as follows: use a 0.02 Normal Calcium Chloride solution in place of distilled water. (c) AASHTO T 59, modified as follows: use distilled water in place of a two percent sodium oleate solution. (d) Chemical composition by ASTM Method D-2006-70: PC= Polar Compounds,   A <sub>1</sub> = First Acidaffins A <sub>2</sub> = Second Acidaffins,   S = Saturated Hydrocarbons		

**Table 18**

<b>Emulsified Type B Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Tests</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77EF (25EC), s	AASHTO T 59	25-150
Residue, percent W	AASHTO T 59 (mod) (a)	62 Min.
Sieve Test, percent W	AASHTO T 59	0.10 Max.
5-day Settlement	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
Pumping Stability (b)		Pass
<b>Residue from Distillation (a)</b>		
Viscosity @ 140°F (60°C), mm <sup>2</sup> /s	AASHTO T 201	2500-7500
Solubility in 1,1,1 Trichloroethylene, percent	AASHTO T 44	98 Min.
Flash Point, COC	ASTM D 92	204EC, Min.
Asphaltenes, percent W	ASTM D 2007	15 Max.
Saturates, percent W	ASTM D 2007	30 Max.
Aromatics, percent W	ASTM D 2007	25 Min.
Polar Compounds, percent W	ASTM D 2007	25 Min.
(a) Determine the distillation by AASHTO T 59 with modifications to include a 300 ±5EF (149±3EC) maximum temperature to be held for 15 minutes.		
(b) Test pumping stability by pumping 475 ml of Type B diluted 1 part concentrate to 1 part water, at 77EF (25°C) through a 1/4 inch gear pump operating at 1750 rpm for 10 minutes with no significant separation or coagulation in pumped material.		
Type B: an emulsified blend of, lube oil and/or lube oil extract, and petroleum asphalt.		

**Table 19**

<b>Emulsified Type B Modified Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77EF (25EC), s	AASHTO T 59	50-200
Residue by distillation or Evaporation (a), percent W	AASHTO T 59	62 Min.
Sieve Test, percent W	AASHTO T 59	0.20 Max.
5-day Settlement, percent W	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
Pumping Stability (b)		Pass
<b>Residue from Distillation (a)</b>		
Viscosity (c) 275EF (135EC), cP	ASTM D 4402	150 - 300
Penetration, 77EF (25EC), dmm	AASHTO T 49	180 Min.
Solubility in 1,1,1 Trichloroethylene, percent	AASHTO T 44	98 Min.
Flash Point, COC, EF (EC)	AASHTO T 48	400(204) Min.
Asphaltenes, percent W	ASTM D 2007	20-40
Saturates, percent % W	ASTM D 2007	20 Max.
Polar Compounds, percent W	ASTM D 2007	25 Min.
Aromatics, percent W	ASTM D 2007	20 Min.
PC/S Ratio	ASTM D 2007	1.5 Min.
(a) Determine the distillation by AASHTO T 59 with modifications to include a 300±5EF (149±3°C) maximum temperature to be held for 15 minutes. (b) Pumping stability is tested by pumping 475 ml of Type B diluted 1 part concentrate to 1 part water, at 77EF (25EC) through a 1/4 inch gear pump operating at 1750 rpm for 10 minutes with no significant separation or coagulation in pumped material. (c) Brookfield Thermocel Apparatus-LV model. ≥ 50 rpm with a #21 spindle, 7.1 g residue, at > 10 torque		
As required by the Asphalt Emulsion Quality Management Plan, UDOT Minimum Sampling and Testing Guide, Section 508) the supplier certifies that the base stock contains a minimum of 15% by weight of Gilsonite Ore. Use the HCL precipitation method as a qualitative test to detect the presence of Gilsonite.		

**Table 20**

<b>Emulsified Type C Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77EF (25EC), s	AASHTO T 59	10-100
Residue (a), percent W (Type C supplied ready to use 1:1 or 2:1.	AASHTO T 59 (a)	30 Min. 1:1 40 Min. 2:1
Sieve Test, percent W (b)		0.10 Max.
5-day Settlement, percent W	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
pH (May be used if particle charge test is inconclusive)		2.0 - 7.0
Pumping Stability (c)		Pass
<b>Tests of Residue from Distillation (a)</b>		
Viscosity, 275EF (135°C), mm <sup>2</sup> /s	AASHTO T 201	475-1500
Solubility in 1,1,1 Trichloroethylene, percent	AASHTO T 44	97.5 Min.
RTFO mass loss, percent W	AASHTO T 240	2.5 Max.
Specific Gravity	AASHTO T 228	0.98 Min.
Flash Point, COC	AASHTO T 48	232 EC, Min.
Asphaltenes, percent W	ASTM D 2007	25 Min., 45 Max.
Saturates, percent W	ASTM D 2007	10 Max.
Polar Compounds, percent W	ASTM D 2007	30 Min.
Aromatics, percent W	ASTM D 2007	15 Min.
(a) Determine the distillation by AASHTO T 59 with modifications to include a 300± 5EF (149 ± 3EC) maximum temperature to be held for 15 minutes. (b) Test method identical to AASHTO T 59 except that distilled water is used in place of 2 % sodium oleate solution. (c) Test pumping stability by pumping 475 ml of Type diluted 1 part concentrate to 1 part water, at 77EF (25EC) through a 1/4 inch gear pump operating at 1750 rpm for 10 minutes with no significant separation or coagulation in pumped material.		
As required by the Asphalt Emulsion Quality Management Plan, UDOT Minimum Sampling and Testing Guide, Section 508), the supplier certifies that the base stock contains a minimum of 10% by weight of Gilsonite ore. Use the HCL precipitation method as a qualitative test to detect the presence of Gilsonite.		

**Table 21**

<b>Emulsified Type D Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77EF (25EC), s	AASHTO T 59	30-90
Residue, (a) percent W	AASHTO T 59 (mod) (a)	65
Sieve Test, percent W	AASHTO T 59	0.10 Max.
pH		2.0 - 5.0
<b>Residue from Distillation (c)</b>		
Viscosity, 140EF (60EC), cm <sup>2</sup> /s	AASHTO T 201	300-1200
Viscosity, 275EF (135EC), mm <sup>2</sup> /s	AASHTO T 201	300 Min.
Modified Torsional Recovery (b)	CA 332 (Mod)	40 % Min.
Toughness, 77EF (25EC), in-lb	ASTM D 5801	8 Min.
Tenacity, 77EF (25EC), in-lb	ASTM D 5801	5.3 Min.
Asphaltenes, percent W	ASTM D 2007	16 Max.
Saturates, percent W	ASTM D 2007	20 Max.
(a) California test method #331 for recovery of residue.		
(b) Torsional recovery measurement to include first 30 seconds.		
(c) Determine the distillation by AASHTO T 59 with modifications to include a 300±5EF (149±3EC) maximum temperature to be held for 15 minutes.		

## 2.3 HOT-POUR CRACK SEALANT FOR BITUMINOUS CONCRETE

- A. Combine a homogenous blend of materials to produce a sealant meeting properties and tests in Table 22
- B. Packaging and Marking: Supply sealant pre-blended, pre-reacted, and pre-packaged in lined boxes weighing no more than 30 lb.
  1. Use a dissolvable lining that will completely melt and become part of the sealant upon subsequent re-melting.
  2. Deliver the sealant in the manufacturer's original sealed container. Clearly mark each container with the manufacturer's name, trade name of sealant, batch or lot number, and recommended safe heating and application temperatures.

**Table 22**

<b>Hot-Pour Bituminous Concrete Crack Sealant</b>			
<b>Application Properties:</b>			
Workability:	Pour readily and penetrate 0.25 inch and wider cracks for the entire application temperature range recommended by the manufacturer.		
Curing:	No tracking caused by normal traffic after 45 minutes from application.		
Asphalt Compatibility: ASTM D 5329, Section 14.	No failure in adhesion. No formation of an oily ooze at the interface between the sealant and the bituminous concrete or softening or other harmful effects on the bituminous concrete.		
Material Handling:	Follow the manufacturer's safe heating and application temperatures.		
<b>Test Method</b>	<b>Property</b>	<b>Minimum</b>	<b>Maximum</b>
AASHTO T 51	Ductility, modified, 1 cm/min, 39.2EF (4EC), cm	30	
UDOT method 967	Cold Temperature Flexibility	no cracks	
AASHTO T 300 (a)	Force-Ductility, lb force		4
ASTM D 5329	Flow 140EF (60EC), 5 hrs 75Eangle, mm		3
ASTM D 3405 (b)	Tensile-Adhesion, modified	300%	
AASHTO T 228	Specific Gravity, 60EF (15.6EC)		1.140
ASTM D 5329	Cone Penetration, 77EF (25EC), 150 g, 5 sec., dmm		90
ASTM D 5329	Resilience, 77EF (25EC), 20 sec., percent	30	
ASTM D 4402	Viscosity, 380EF (193.3EC), SC4-27 spindle, 20 rpm, cP		2500
ASTM D 5329	Bond as per ASTM D 1190, Section 6.4		Pass
(a)	Maximum of 4 lb force during the specified elongation of 30 cm @ 1 cm/min, 39.2EF (4EC).		
(b)	Use ASTM D 3405, Section 6.4.1. Delete bond and substitute tensile-adhesion test in accordance to D 5329.		

**PART 3      EXECUTION      Not used**

END OF SECTION

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 02748M**

**PRIME COAT/TACK COAT**

**Delete Article 2.1, Paragraph A., and replace with the following:**

**2.1 PRIME COAT**

- A. MC-70 or MC-250, meeting the requirements of Section 02745.

**Delete Article 2.2, Paragraph A., and replace with the following:**

**2.2 TACK COAT**

- A. SS-1H, CSS-1, & CSS-1H emulsified asphalt meeting the requirements of Section 02745.
  - 1. Diluted 2:1 (two parts concentrate to one part water) by the manufacturer.
    - a) Dilute at terminal only.
    - b) Do not change dilution without obtaining prior written approval from the Engineer.

**Delete Article 3.2, and replace with the following:**

**3.2 APPLICATION**

- A. Apply at the following rates:
  - 1. Prime Coat: 0.5 gal/yd<sup>2</sup>
  - 2. Tack Coat: 0.15 gal/yd<sup>2</sup>

**The above application rates may vary according to field conditions.  
Secure approval for the quantities, rate of application, temperatures, and  
areas to be treated before any application.**
- B. Do not apply prime coat or tack coat:
  - 1. On a wet surface.
  - 2. When the surface temperature is below 50 degrees F.

- 3. When weather conditions prevent it from adhering properly.
- C. Protect all structures including guardrails, guide posts, etc. from being spattered or marred.
- D. Use a pressure distributor to apply the asphalt in a uniform, continuous spread.
- E. Keep the viscosity between 50 and 100 centistokes. AASHTO T 201.
- F. Immediately apply another application to under primed surface.
- G. Apply a prime or tack coat to all surfaces, including vertical that will come in contact with Hot Mix Asphalt.
- H. Spread blotter material if the prime coat fails to penetrate. Use the quantities required to absorb the excess asphalt.



**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 02771M**

**CURBS, GUTTERS, DRIVEWAYS, PEDESTRIAN ACCESS  
RAMPS, AND PLOWABLE END SECTIONS**

**Add the following to Part 1:**

**1.4 SUBMITTALS**

- A. Manufacturer Warranty:
  - 1. Provide a full warranty covering 100 percent of the surface applied detectable warning surface materials including installation for one year.
    - a. Manufacturer is responsible for quality control of the materials, proper placement by the Contractor or subcontractor, and all other factors that affect the service life of the materials.
    - b. In the event of a performance failure, repair or remove and/or replace all detectable warning surfaces that have failed at no cost to the Department.
    - c. Failure to maintain a bond to the asphalt or concrete surface over the entire surface is considered a failure of the detectable warning surface and requires that it be repaired or replaced under the warranty terms.

**1.5 MANUFACTURER SUPPORT REQUIREMENT**

- A. Provide technical support to the Contractor during the placement of the detectable warning surface, including information about handling, storage, placement, and other installation training that may help assure the quality of the installed detectable warning surface.

**Delete paragraph 2.5 A and replace with:**

- A. Detectable Warning Surface – In-line truncated dome pattern that meets the requirements of GW series Standard Drawings. Provide the color yellow. Acceptable products for installation are as follows:
  - 1. Polymer Composite Panel – Polymer Composite, homogenous integral

- color (UV stable), skid resistant, non-glare finished panel. Use for new construction or retrofit construction.
2. Precast Concrete Panel – High strength concrete with high tensile stainless steel tendons, homogeneous integral color (UV stable), skid resistant panel. Use for new construction, or retrofit construction.
  3. Preformed Thermoplastic Detectable Warning Material – Must be resilient with uniformly distributed abrasives both on the surface and throughout the material to provide skid resistance. The material must be capable of being affixed to bituminous and/or Portland Cement Concrete pavements by the use of the heat of a propane torch. Use for retrofit construction.

**Add the following to Article 2.5:**

- B. The minimum service life under all wear conditions is one year.

**Add the following to Article 3.6**

- C. Surface Applied Preformed Thermoplastic Detectable Warning Material
  1. Install as per manufacturers written instructions.

END OF SECTION

March 30, 2005

**SPECIAL PROVISION**

**PROJECT #SP-9999(809)**

**SECTION 02786M**

**OPEN GRADED SURFACE COURSE (OGSC)**

**Delete paragraph 1.2 A and replace with the following:**

A. Special Provision 01453S: Pavement Smoothness Improvement and Profiler

**Delete paragraph 1.4 E 1 and replace with the following:**

1. Determine acceptance and correct in accordance with Special Provision 01453S.

**SPECIAL PROVISION**

**SECTION 02969S**

**OPTIONAL USE OF RECLAIMED ASPHALT PAVEMENT**

**Delete section 02969 in their entirety and replace with the following:**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Option to incorporate Reclaimed Asphalt Pavement (RAP) materials into hot mix asphalt pavement, dense-graded material only.

**1.2 RELATED SECTIONS**

- A. Section 02741: Hot Mix Asphalt (HMA)
- B. Section 02745: Asphalt Materials

**1.3 REFERENCES**

- A. AASHTO M 320: Performance Graded Asphalt Binder
- B. AASHTO T 164: Quantitative Extraction of Bitumen from Paving Mixtures
- C. AASHTO T 170: Recovery of Asphalt from Solution by Abson Method
- D. UDOT Materials Manual of Instruction
- E. UDOT Minimum Sampling and Testing Guide

**1.4 SUBMITTALS**

- A. Quality Control Plan.
  - 1. Submit the proportion of materials from each of the RAP stockpiles intended to be used in the project.
  - 2. Submit the sampling and testing plan for the project.
  - 3. Provide for testing, by an AMRL accredited laboratory, of the reclaimed material and the total mixture at no additional cost to the Department.
  - 4. Submit to the Engineer for approval.

## **PART 2      PRODUCTS**

### **2.1      PG BINDER**

- A.      Select and supply a standard AASHTO M 320 PG Binder meeting the requirements of Sections 02745 and Section 509 of the UDOT Minimum Sampling and Testing Guide: Asphalt Binder Quality Management Plan, in accordance to Table 1.
- B.      Perform Department Quality Assurance testing on the supplied grade of standard PG Binder in accordance to Section 509.

### **2.2      MIX DESIGN**

- A.      Obtain Engineer's approval for the use of RAP in the hot mix asphalt.
- B.      Use up to 30 percent RAP by total weight in the hot mix asphalt, in accordance to Table 1.
- C.      Provide the following for each RAP Stockpile:
  - 1.      Extracted Gradation
  - 2.      Asphalt Content
  - 3.      SSD Specific Gravity of Extracted RAP
- D.      Provide the following for the RAP Material combined in proportions for the intended production of HMA:
  - 1.      Performance Grade of recovered asphalt binder.
    - a.      Use AASHTO T 164, Method E, with reagent grade Trichloroethylene, and AASHTO T 170 to recover the asphalt binder.
    - b.      Determine the performance grade of the recovered binder in accordance to AASHTO M 320 with the following modification:
      - (1)      PAV aging is not required before testing for fatigue and low temperature cracking.
- E.      Select the percentage of RAP by total weight in the hot mix asphalt and the standard, virgin asphalt binder grade meeting Section 02745, using Table 1:

**Table 1**  
**Binder Selection Guidelines and Total Allowable RAP for RAP Mixtures**

<b>Recovered RAP Asphalt Binder Grade</b>	<b>Desired RAP Percent</b>	<b>Recommended Virgin Asphalt Binder Grade</b>
PGXX-22 or lower	< 20 percent	No Change in the Design Grade of the Asphalt Binder
	20 -30 percent	Select Virgin Binder one grade softer than normal (e.g. select a PG64-34 if a PG70-28 is the design grade*)
PGXX-16	< 15 percent	No Change in the Design Grade of the Asphalt Binder
	15 - 25 percent	Select Virgin Binder one grade softer than normal (e.g. select a PG64-34 if a PG70-28 is the design grade*)
PGXX-10 or higher	< 10 percent	No Change in the Design Grade of the Asphalt Binder
	10 - 15 percent	Select Virgin Binder one grade softer than normal (e.g. select a PG64-34 if a PG70-28 is the design grade*)

\* Do not select any grades lower than PG XX-34.

- F. Meet all the requirements of Section 02741 and the following:
  - 1. Average wheel impression not to exceed 10 mm in 20,000 passes when tested in accordance with Hamburg Wheel Track Testing of Compacted Bituminous Mixtures, UDOT Materials Manual of Instruction Section 990.
    - a. Provide to UDOT Central Laboratory sufficient mix to preform test. Allow ten days for results.
  - 2. Meet all the requirements of Aggregate Properties of Section 02741 for the virgin aggregate portion of combined virgin and RAP aggregate.
- G. Complete the mix design for the combined virgin and RAP materials following Superpave volumetric mix design procedures. Use an AMRL accredited laboratory for the design.
- H. Provide the following for the combined virgin and RAP materials:
  - 1. Gradation
  - 2. Asphalt content
  - 3. RAP content

## **PART 3      EXECUTION**

### **3.1      RECLAIMED MATERIAL**

- A.      Crush or screen the reclaimed material to be used for recycle to pass a 1-1/2 inch sieve.
  - 1.      Construct stockpile platforms in such a way to prevent intrusion of subgrade materials into RAP.
  - 2.      Provide adequate drainage for the stockpile site.
  - 3.      Use separate cold feed bins for each stockpile.
  - 4.      Use screened reclaimed material free of organic materials, soil, or other foreign substances.

END OF SECTION